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WESTERN INSTITUTE OF NURSING

The Western Institute of Nursing (WIN) is the western regional nursing organization that succeeded the Western Council on Higher Education for Nursing (WCHEN). In 1985, following extensive deliberations by special committees, the decision to create an autonomous, self-supporting organization was implemented. At the first meeting of the new organization, nurses from collegiate schools of nursing and health care agencies adopted the bylaws and the new name of the organization, Western Institute of Nursing. The organization moved to Portland, Oregon on July 1, 1996. The Western Institute of Nursing was incorporated on November 3, 1998 in accordance with the Oregon Nonprofit Corporation Act.

WIN exists to bring together a diverse community of nurses in a shared commitment to transcend the boundaries of knowledge development and application to advance the discipline and drive improvements in practice, outcomes, and cost. The organizational structure includes the Membership Assembly, the Board of Governors, committees, and societies.

There are six categories of membership in WIN: agency, individual, student, retired nurse, associate, and honorary. Agency memberships are open to organized nursing education programs and organized nursing practices in one of the states designated by the Board of Governors as being in the western region. Individual membership is open to nurses who support the mission of WIN. Student members must be matriculated in a degree granting program. Associate memberships are open to individual non-nurses and to organizations, agencies, and businesses outside the western region that support the mission of WIN. Honorary memberships include those designated for Emeritus status and those who have made supporting contributions to WIN.

COMMUNICATING NURSING RESEARCH
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Volume 2: Problem Identification and the Research Design
Volume 3: Methodological Issues in Research
Volume 4: Is the Gap Being Bridged?
Volume 5: The Many Sources of Nursing Knowledge
Volume 6: Collaboration and Competition in Nursing Research
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The Cumulative Index of the Communicating Nursing Research Conference Proceedings, Volumes 1 to 25, (1968-1992) was published in 1992.

COMMUNICATING NURSING RESEARCH has been published annually by the Western Institute of Nursing. Each volume contains the abstracts of papers presented at the annual Communicating Nursing Research Conference.

PREFACE

The 56th Annual Communicating Nursing Research Conference, “Leveraging Technology to Advance Nursing and Equity in Research, Practice, and Education,” was held in Tucson, Arizona from April 19-22, 2023.

The keynote address was delivered by **Robert J. Lucero**, PhD, MPH, RN, FAAN, Associate Dean of Equity, Diversity & Inclusion; Professor; Inaugural Adrienne H. Moseley Endowed Chair in Diversity, Equity, and Inclusion, UCLA School of Nursing. State of the Science presentations were delivered by: **Roschelle “Shelly” Fritz**, PhD, RN, FAAN, Associate Professor, College of Nursing, Washington State University; **Janine E. Hinton**, PhD, MN, RN, CHSE, Associate Clinical Professor, College of Nursing, and Director, Steele Innovative Learning Center, The University of Arizona; and **Cynthia Nuttall**, MSN, MPA, PhD, RN, NE-BC, Chief Nurse, Academic Affairs, Professional Practice, and Research, New Mexico VA Healthcare System; Adjunct Assistant Professor, College of Nursing, University of New Mexico.

Two award papers were presented:

Distinguished Research Lectureship Award: **Mary A. Nies**, PhD, RN, FAAN, FAAHB, Special Assistant to the Dean, College of Health for Grant Writing; Tenured Professor of Nursing; Joint Appointment, MPH Program, College of Health, Idaho State University

Carol A. Lindeman Award for a New Researcher: **Omeid Heidari**, PhD, MPH, ANP-C, Assistant Professor, Child, Family, and Population Health Nursing, University of Washington, Seattle, WA

The Proceedings include the abstracts of symposium, podium, and poster presentations. One hundred and forty-six papers were presented in podium sessions on a wide variety of topics. Sixty papers were presented in twelve symposia, and eighty-six papers were organized in seventeen other podium sessions. Four hundred and twenty posters were presented, representing projects and research, completed or in-progress. A total of two hundred and one posters were submitted from member institutions for the Research & Information Exchange.

The conference was planned and organized by the WIN Program Committee, and we extend our gratitude to Committee members: Cara Gallegos, Chair, ID; Michael D. Aldridge, CO; Linda S. Edelman, UT; Martha L. Grubaugh, CO; Seiko Izumi, OR; Ahlam Jadalla, CA; Hannah Jang Kim, CA; Mary Koithan, WA; Judy A. Liesveld, IL; Lauri Linder, UT; Paula Meek, UT; Austin Nation, CA; Joanne Noone, OR; Anjanette Raber, OR; and Krista Scorsone, CO.

We extend our gratitude to all those who submitted papers and participated in the 2023 conference.

Annette Nasr, PhD, RN
President, Western Institute of Nursing

Cara Gallegos, PhD, RN
Chair, Program Committee, Western Institute of Nursing

The Carol A. Lindeman Award for a New Researcher Paper

TELEHEALTH FOR OPIOID TREATMENT AND HARM REDUCTION: IMPLICATIONS FOR NURSE MANAGED CARE

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INTRODUCTION

As the COVID-19 pandemic enters its third year, the United States must face the impacts of what many have referred to as a collision of epidemics: the intersection of COVID-19 and the opioid crisis. Many jurisdictions throughout the country show increases in overdose rates.[1-3] Additionally, people who use opioids have faced significant disruptions in crucial substance use treatment services because of the pandemic, which can lead to increases in relapse and overdose risk. A broad, cross-sectional survey conducted by the Addiction Policy Forum in 2020 found that over one third of respondents diagnosed with a substance use disorder experienced changes in their treatment or support services because of the pandemic, with 14% reporting being unable to access these services.[4]

Medication for opioid use disorder (MOUD) has been recognized as a best practice in the treatment of individuals with opioid use disorder (OUD).[5,6] MOUD treatment is associated with multiple positive outcomes among people with OUD, including reductions in both all-cause and overdose mortality by up to one half, a decreased risk of relapse, reduction in risk behaviors associated with HIV and HCV transmission, increased treatment retention, and improved social functioning.[7-9] Recent legislation allows nurse practitioners to prescribe MOUD in addiction and non-addiction (i.e. primary care) settings.[10] Evidence has shown that with this policy change, nurse practitioners received their x-waiver to prescribe MOUD at a faster rate than physician colleagues and delivered these services in priority settings.[11] Nurse-managed opioid treatment programs allow nurses and nurse-practitioners to provide holistic addiction care to people with OUD and expand access to this essential service.[12]

In March of 2020, the Substance Abuse and Mental Health Services Administration and the Drug Enforcement Agency issued guidance expanding the use of telehealth for management of MOUD (tele-MOUD).[13, 14] While nurses and nurse practitioners play a key role in MOUD delivery, no study to date though has examined the role of tele-MOUD in nurse managed MOUD care, and how this tool can be utilized in ongoing care. This study sought to understand the role of MOUD prescribers, nurses, and substance use counselors in providing high quality tele-MOUD, the experiences of their patients in receiving care through tele-MOUD and the use of tele-MOUD in nurse managed MOUD care.

METHODS

<u>Participants</u>: Between June-September 2021 we conducted semi-structured qualitative interviews with 20 prescribers (9 nurse practitioners and 11 physicians), 7 substance use counselors and nurses, and 20 patients utilizing tele-MOUD. We utilized purposive sampling from a variety of care venues, including academic affiliated outpatient clinics, community-based clinics, and low-barrier OUD treatment programs to assess a variety of experiences and resources. MOUD prescribers were initially contacted with an email and received one follow-up email for recruitment. Inclusion criteria included having an active Drug Enforcement Agency license to prescribe controlled substances, an active X-waiver to prescribe MOUD, and reporting use of

tele-MOUD management within the past 6 months. Nurses and substance use counselors were also initially contacted with an email and received one follow-up for recruitment. Eligible participants reported active licensure or certification in their respective profession and use of tele-MOUD visits with patients. Following interviews, prescribers, nurses, and substance use counselors were provided a flyer to distribute to their MOUD patients. Physical copies of this flyer were also displayed at participating clinics. Interested patients contacted the study team for a screening call. Patient eligibility criteria included current prescription of MOUD and use of tele-MOUD at least once in the last 6 months for MOUD services.

Data collection: All interviews were conducted over either Zoom or an audio-only phone call per the participant's preference. Interviews lasted from 30-75 minutes. All interviews were audio recorded and transcribed verbatim. Interview questions explored experiences with tele-MOUD, with question categories focusing upon barriers, facilitators, and best practices. Additional patient questions probed about participant's experience with utilizing tele-MOUD, its impact on quality of care delivered/received, and future models for its continued use in practice. Healthcare providers received $20.00 and patients $30.00 for interview completion. The consolidated criteria for reporting qualitative research (COREQ) were utilized to maximize quality and trustworthiness.[15]

Data analysis: A qualitative descriptive methodology was applied, focusing on participants' perspectives of using tele-MOUD services.[16] Initial *a priori* codebooks for healthcare providers (prescribers, nurses, and substance use counselors) and patients were used to inform initial codebook development. The study team then jointly reviewed the same interview transcripts and revised both codebooks, identifying emergent themes and conducting *in vivo coding.* Coding was conducted in Atlas.ti version 9.0. The research team independently coded multiple healthcare provider and patient transcripts. Inconsistencies in coding were reviewed by the research team and the codebooks revised until a sufficient inter-coder agreement was reached. Thematic analysis focused on the utility of tele-MOUD and best practices in nurse-managed care for sustained delivery of high-quality MOUD services utilizing tele-MOUD.

RESULTS

47 individuals were interviewed for this study. Thematic analysis from MOUD prescribers, nurses, and patients highlighted the following themes: 1) Overall benefit of tele-MOUD, with prescribers and nurses recognizing improved retention and patients highlighting the flexibility in care tele-MOUD provided, and 2) Preferring a hybrid approach with tele-MOUD. Additionally, prescribers and nurses, in describing their preparation to conduct tele-MOUD visits, described a theme concerning a lack of training to provide tele-MOUD, including adjusting how to assess adherence to prescribed regimens through tele-MOUD. Additionally, nurses and substance use counselors highlighted approaches for engaging tele-MOUD patients: 1) Texting patients prior to and between appointments, 2) Managing "call-in" lines for patients with inconsistent access to tele-MOUD, and 3) Assessing adherence and withdrawal symptoms prior to prescriber appointments.

Overall benefit of tele-MOUD

Prescribers were positive regarding the flexibility tele-MOUD gave their patients. When visits were in-person exclusively prior to the COVID-19 pandemic, they reported clinic structures that were not conducive to their patient's lifestyle or accommodating to the patient's work or home responsibilities. Prescribers appreciated the ability to follow up with their patients in a flexible manner via tele-MOUD, connecting with them at a time during the day that worked with their schedule and often removing barriers associated with in-person clinical visits. These barriers included needing to take time off work or finding child and/or elder care, transportation to and from the appointment, which was often on public transportation, and the costs associated with these barriers. Said one provider:

> "I do know particularly for my patient who are doing well and working 40 hours a week, telehealth is great because otherwise an appointment with me took three hours, they had to get there, they had to wait, see me and then get back to where they were going. Now they can say I get off work at 4:00 and I'll go sit in my car and I'll say fine, I'll see you at 4:05 and we'll do a 20-minute visit and it took 20 minutes of their day but it didn't disrupt their work. It didn't disrupt anything. So it has huge bonuses I think."

Patients echoed similar appreciation for the flexibility that tele-MOUD provided. One patient whose provider has since changed back to exclusively seeing patients in-person remarked,

> "It's easier overall, for somebody that's, I guess, doing what I'm doing, because I didn't want to use [drugs] anymore. I didn't want to go through that ritual of going to the place and seeing everybody and sitting around in the lobby, waiting to get seen, every week or every month. I'd still do it, but I wish it was all tele appointment."

The same patient also addressed the cost associated with in-person appointments due to a day lost at work after factoring in travel to and from the clinic and time spent for the appointment: "it took the whole day away on a Saturday. I couldn't work because the appointment, say, was at 10 o'clock. The day's shot." Finally, in discussing the benefits of tele-MOUD in providing flexible care to patients, one provider with knowledge of their clinic's retention of MOUD patients remarked:

> "So in essence, our no show rate-- pre-pandemic, our no show rate was-- I'm not the office manager, but I'm pretty much involved in the operations of the place. Our no show rate was less than 20% pre-pandemic. With telemedicine, telephone, and all the type of access that we're able to reach these patients, our no show rate is down to below 5%. Transportation to the appointment is a big factor."

Hybrid approach with tele-MOUD

Providers and patients agreed that tele-MOUD should continue in conjunction with in-person visits. Patients described their in-person visits as a means for accountability as well as for the therapeutic relationship with their healthcare provider and team. One patient discussed his preference for telehealth visits for primary care, where he also receives his MOUD:

> "I like mix. Yeah, I like mix because sometimes it's not just about the Suboxone. By him being the primary care it's different other things that he talk to me about or he might check. So at one point I like – I love over the phone. I do. But I like it mixed so I can, you know, talk to him or he can actually see me too."

Providers proposed many ways to incorporate the flexibility of tele-MOUD both for their own and their patient's busy schedules. Most frequently, providers discussed incorporating a hybrid model where patients were seen over tele-MOUD between in-person visits. These visits were not as formal as their in-person visits but provided both the provider and patient an opportunity to connect regarding their MOUD, discuss harm reduction, and assess other primary care and preventative healthcare needs. In deciding which patients received tele-MOUD services, providers broadly agreed that the decision should be made with patients and personalized to their needs and goals of care. Additionally, as one provider described, providers should use tele-MOUD broadly in this hybrid model, and not reserve it for those who are deemed most stable in their care:

> "Well, I'm hoping to keep telehealth. I think it is very useful. Particularly for stable patients. Also very useable to some degree for unstable patients. For stable

> patients you're seeing every couple of weeks it's a very low threshold to see them because they just have to pick up their phone. For unstable patients, it's an easy way for me to touch base with them and if their lives have gotten chaotic and they aren't showing up for an appointment I don't have to assume the worst and I can connect with them for a telehealth session and kind of get the information as to well, why didn't you show up? What's going on? So I hope to be able to keep both because I think they both have a role and it isn't a particular kind of patient for which it has a role, it's more circumstances."

Preparation to utilize tele-MOUD

Nearly all prescribers described unease with the quick pivot to use of tele-MOUD initially, particularly given the lack of training on its best use. Said one provider, "I have never been trained in it, I never learned how to do it – nobody taught me how to do telemedicine." Prescribers and nurses described initial difficulties with connecting with patients using tele-MOUD and technology challenges, but these were abated as the care teams and patients grew accustomed to using tele-MOUD. However, care delivery and assessment remained concerns for prescribers and nurses. Both described needed to adjust how they conducted assessments of adherence without the ability to utilize toxicology screenings, a tool that was available to them with in-person MOUD care. One nurse practitioner described how they and others in their practice utilized their patient interview to assess adherence while also learning more about their patient's prognosis in ways a urine toxicology test could not:

> "That's really what I'm measuring. How well are you staying in touch with me. How well are you telling me that you're taking your medicine. I am kind of relying completely on patient report, which is fantastic, I love that. But it's a different type of metric when before I think sometimes we relied on urine tox screens, and I don't think that that's actually the best thing to rely on. I think actually patients do better when we don't rely on that, and I think that there's a huge case to be made to not drug test as much."

Other methods to engage tele-MOUD patients

Nurses and substance use counselors described multiple new services to retain and engage their patients through tele-MOUD. These services allowed them to remain in contact with patients, particularly though long stretches during the COVID-19 pandemic when in-person care was not an option. Sending patients texts through a centralized system managed by all nurses and counselors allowed an "on call" team member to address any emerging needs of their patient population during and after normal business hours. Nurses also described utilizing this service to follow up with patients during the initial stages of the treatment to keep in contact with patients, assess their tolerance of a new MOUD regimen, and provide harm reduction counseling. As an extension of this service, some nurses and counselors managed "call in" lines for their patients. This service was more common at low-barrier facilities to accommodate patients with limited access to cell phones for their tele-MOUD visits. From "call in" lines, nurses were able to triage patient needs and conduct nursing assessments. They described assessing the patient's cravings and withdrawal symptoms, verifying their MOUD dose, timing of their next prescription, and coordinating with the prescriber the next steps for the patient to continue to receive their medication without delays. This process allowed the nurses to practice to the full extent of their license and allowed prescribers to efficiently see scheduled and add-on patients; said one nurse:

> "I got a lot of their [the patient's] information on the phone, and then I had that information to give to the providers, so that they already knew a lot of stuff when they came in. And the patients could – the new patients could get in and out more quickly than had we not done that."

DISCUSSION

This study details the experiences of MOUD prescribers, nurses, substance use counselors and patients utilizing tele-MOUD. Uniquely, this study examined practices one year into use of tele-MOUD services and is one of few studies that sought prescriber, nursing, substance use counselors, and patient perspectives. Themes from this study support the ongoing use of tele-MOUD for hybrid care to provide flexibility in care delivery. While prescribers and nurses did not have formal training for providing tele-MOUD, adjustments to service delivery described in these findings indicate how nurse-managed care can continue to expand access to and retention in MOUD care to curb deaths from the opioid epidemic.

Flexibility emerged as a prominent theme among care team providers and patients. The prescriber, nurse, or substance use counselor could follow up with patients new to care more frequently without the need for in-person visits. This flexibility also transferred to follow-up visits, allowing for the care team to schedule patients for tele-MOUD visits and reduce the frequency of in-person visits, all of which facilitated retention in care. Shared decision-making principles can guide decisions for follow-up and are further supported by this flexibility.[17] The patient and care team can decide together the goals of treatment with MOUD, markers of success, and with respect to this theme, the length of the prescription and whether follow-up will be in-person or with tele-MOUD. Given that many patients with OUD expressed competing priorities which often introduced barriers to healthcare access[18], this flexibility also allowed prescribers and nurses the ability to reach patients when situations prevented an in-person visit; both patients and provider teams discussed this as a point of satisfaction with tele-MOUD because it allowed for continued prescription of MOUD even if patients had changes in their schedule. This hybrid approach has been echoed in other studies and found feasible in one[19], but requires further implementation and evaluation at a larger scale, including with the use of a toolkit to guide providers through best practices of tele-MOUD.[20]

Nurses echoed the importance of clinical touch points, and how tele-MOUD enabled their ability to follow-up with patients and expand services. Similar to how nurse case-manager models have been successful for follow-up and engagement of patients for other chronic diseases[21], tele-MOUD can be a tool for nurse-managed MOUD. Text messaging described by nurses and substance use counselors in this study are one means for engagement with patients, a tool which has been shown to improve medication adherence in a meta-analysis.[22] Additionally, uptake of tele-MOUD as a component of care can be strengthened with formal training. Some clinicians in this study described their lack of preparation for using tele-MOUD. As medical, nursing, and physician associate schools add this component to their curriculum, state legislation, similar to a recent bill in Washington state[23], can require healthcare providers to complete continuing education which specifies regulatory and clinical practice implication of using telehealth.

There are limitations to consider. These interviews, while robust in number of participants and locations where MOUD care is provided, are limited to the contextual experiences of tele-MOUD and are not generalizable. This study included nurse practitioners who prescribed MOUD with full practice authority, which is not true in all U.S. states. Finally, these interviews, while conducted a year into the COVID-19 pandemic when participants had grown accustomed to tele-MOUD, do not capture longitudinal experience with tele-MOUD. One systematic review noted that while most studies of tele-MOUD showed favorable short-term outcomes of retention and positive experiences, there is not robust evidence with long-term outcomes using tele-MOUD.[18]. Future studies should utilize long-term clinical data and in particular utilized mixed-methodologies to examine quantitative measures of retention when using a patient-centered and hybrid approach, as well as capture qualitative measures to provide contextual evidence of successful care delivery and areas that require improvement and further study.

In conclusion, this study provides contextual experiences of MOUD prescribers, nurses, and patients using tele-MOUD. Both patients and care team members expressed the flexibility tele-MOUD afforded them and how it strengthens the patient's relationship with the care team. Hybrid care with shared-decision making principles allow nurses to create patient-centered goals, build a therapeutic relationship with their patients and utilize tele-MOUD visits as a means to reach patients and promote retention in care.

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ABSTRACTS OF SYMPOSIUM PRESENTATIONS

ADVANCING FOUR CORNERSTONES OF INCLUSIVE EXCELLENCE IN NURSING ACADEMIA

Advancing Four Cornerstones of Inclusive Excellence in Nursing Academia

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Background: Increasing globalization, escalating health disparities, and ethnic minority population growth highlight the necessity to not only attract and educate nursing professionals of diverse heritage, but also increase the inclusive excellence (IE) of all nurses to better meet the needs of our changing society. Despite sweeping efforts, methods to operationalize IE and produce meaningful outcomes to meet societal demands has proven to be difficult as evident in the scant available literature detailing implementation of IE strategies in nursing academia. Thus, overt progress towards advancing diversity in nursing academia remains elusive. In this symposium we describe how we have sought to increase equity, diversity, and inclusivity (EDI) by implementing a series of novel initiatives.

Purpose: Facilitated through federally funded project awards and internal institutional grants designed to advance diversifying the nursing workforce and strengthening EDI within the University of Arizona College of Nursing, the specific purpose of this symposium is to describe four initiatives representing the cornerstones of our IE Framework (see diagram). We communicate potential strategies for the broader academic nursing community to consider as they seek IE.

Approach: To develop a comprehensive approach with meaningful foci to guide us, we framed the cornerstones of 1) Accelerated Academic Access, 2) Inspired Academic and Career Success, 3) Enriched Community Engagement, and 4) Harmonized College Climate and Citizenry. We report on four unique, but interconnected, initiatives designed to actualize the four cornerstones.

Outcomes: In paper 1, we present our accelerated academic access initiative, especially designed for diverse students. In paper 2, we describe the development of a student holistic wellness and success instrument to guide faculty in tailoring student mentoring for personalized and aspirational learning and career development. In paper 3, we outline our comprehensive student success initiative that has bolstered enriched community engagement for our underrepresented nursing students, particularly first generation, rural upbringing, Native American, and/or Hispanic/Latinx background. Lastly in paper 4, we describe our unique faculty development educational initiative by which we are enhancing uptake of pedagogical practices and enriching the college climate and citizen engagement as characterized by *cultural humility*.

Conclusions: With an IE emphasis, the collective outcomes of this project have included expanded access to new academic and community partnerships and re-envisioned and streamlined nursing learning experiences and degree paths. It has spurred the design of a novel heuristic for holistically personalizing student mentoring and promoted programming to bolster the ‘sense of belonging’ for student scholars of diverse heritage. Additionally, it has cultivated our deeper consideration of faculty IE learning needs and how to ingrain IE-congruent, culturally humble behaviors into our teaching- and workplace environments. This project continues to provide us with the impetus to conduct ongoing evaluation of project and initiative impact and to refresh, improve and expand initiatives to optimize beneficial change in our college.

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ADVANCING FOUR CORNERSTONES OF INCLUSIVE EXCELLENCE IN NURSING ACADEMIA

Inclusive Excellence in Academia: Accelerated Academic Access

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Background: The current model of nursing degree offerings at many schools may be doing a disservice to students, including those from groups underrepresented (UR) in our field. Models fail to focus students on aspirational and career goals and often harbor lengthy and redundant requirements across degrees, potentially slowing goals to diversify the echelon of well-educated and competent nursing leaders. To accommodate current pressure on nursing graduates with associate’s degrees (AD) to earn a bachelor’s degree (BSN), concurrent education programs (CEPs) between community colleges (CC) and universities are evident. However, these often function in a siloed fashion. To actualize the Accelerated Academic Access cornerstone of the University of Arizona (UA) Nursing Inclusive Excellence (IE) Framework, we have developed the **Nursing Career Advance Ladder (NCAL)** initiative.

Purpose: The specific purpose of the NCAL initiative was to create a connected, scaffolded, and expedited degree ladder across associate’s and bachelor’s degrees through to master’s and doctorate degrees as a basis for fostering aspirational career-focused mindsets, especially among UR student scholars.

Approach: Building the NCAL required in-depth analysis of the:1) community college nursing curriculum, 2) UA general studies requirements (two-year pre-nursing), 3) UA professional nursing BSN completion curriculum and 4) connections to practice-centric master’s and doctoral programs. This analysis revealed needed changes to ‘outside’ and ‘inside’ the College systems. Outside quests included changes to essential UA policies and discussions with community college colleagues. Inside we assessed and advocated for relevant cross-degree-program changes. External federal grant funding and internal support propelled the NCAL-building efforts.

Outcomes: Through the NCAL initiative, we have produced scaffolded, accelerated degree paths, and revised advising processes to inspire students at the beginning of their entry into nursing to envision educational pursuits that will underpin career-long plans. The collaborative and coordinated cross-degree curricular paths that blend associate’s degree with bachelor’s degree studies has resulted in a more cost-conservative choice for students and expansion of our academic partnerships. The goal to accelerate degree attainment and therefore leadership development through academic pursuits was achieved by creating opportunities to earn credits for the next degree within current degree paths. Outcomes include revised UA policies and a ‘next degree’ jump start model for motivated and qualified student scholars with total degree credit reduction and therefore less cost and faster progress toward advanced degrees. Policy shifts have included changing credit requirements for second language proficiency from mandatory to elective status and expanding community college credits transfer credits to 90 from 60 credits to effectively accommodate similarities between pre-RN studies across associate’s and bachelor’s nursing degree programs.

Conclusions: The NCAL initiative has advanced the Accelerated Academic Access cornerstone of the IE Framework by providing a collaborative, enhanced and lesser expensive choice for achieving 4-year university nursing credentials for student scholars and especially those from UR groups. For UA Nursing, it has expanded our academic partnering, sharpened our curricula for accelerating degree progression and brought career-focused and aspirational advising to the forefront.

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ADVANCING FOUR CORNERSTONES OF INCLUSIVE EXCELLENCE IN NURSING ACADEMIA

Student Holistic Appraisal of Wellbeing and Success (SHAWS) Scale Development

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Background: Recognizing that a solid foundation is needed for tailoring student academic support, especially for students from under-represented backgrounds, and to actualize the *Enriched Academic and Career Success* cornerstone of our Inclusive Excellence (IE) framework, we developed the Student Holistic Appraisal of Wellbeing and Success (SHAWS) Scale. The scale is based on the Kreitzer Model of Wellbeing, which views an individual as an integrated system within a larger organizational strategy. Each scale item is aligned with a dimension of the model including health & wellness, relationships, security, purpose & values, community, & the environment. To support students, advisors, and faculty in creating personalized academic success plans, the scale encompasses a strength-based approach to assess students from diverse backgrounds and identify opportunities for student support and personal growth.

Purpose: The purpose of this initiative was to develop a tool for educators and academic advisors to assess students using a whole person model and translate the insights into personalized guidance/mentoring for success. The SHAWS scale allows assessment of physical, mental, social, and spiritual determinants that are related to educational success and the status of essential attributes of future nurse leaders in practice, education, and research.

Methods: Our team initially designed the scale based on student success literature and faculty experience. We asked a panel of experts representing clinicians, educators, and researchers (N = 5 respondents) to assess the initial SHAWS version. In addition, a focus group of 8 entry-level nursing students from diverse backgrounds assessed initial feasibility, scale usefulness, and student-focused interpretation of scale items. Based on critical review of comments from expert panel and the student focus group discussions, we then revised the scale. The scale revisions minimized redundant items and clarified item language. We then asked a second expert panel (N= 9 respondents) for input on the revised scale; each item was rated on a 4-point Likert scale ranging from ‘not relevant’ to ‘very relevant’.

Results: The initial scale included 53 items. After the initial expert panel review and several items were revised or eliminated, the scale was refined to 41 items. With feedback from the second expert panel, a Content Validity Index (CVI) was calculated. Individual item content validity index scores revealed 35/41 items were rated as very relevant (CVI = 1.0) and 6/41 items were rated as relevant with minor revisions (CVI = .875 - .89) indicating strong validity of all 41 items. The total scale-CVI was calculated at .976. Comments from expert panel members included points of clarification for specific items and minor recommendations for clarification of the item rating scale.

Conclusions: The SHAWS scale was judged to be a feasible instrument with strong content validity. Designed to encompass the physical, mental, social, and spiritual determinants of student success, we are applying it and evaluating impact on student progression and success. This scale has potential to be a powerful advising and mentoring tool to identify student strengths and areas for academic support and provide data for developing a wholistic plan leading to greater academic and career achievement.

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ADVANCING FOUR CORNERSTONES OF INCLUSIVE EXCELLENCE IN NURSING ACADEMIA

Inclusive Excellence in Academia: Inspired Academic and Career Success

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Background: Primary restraint factors for optimal preparation of underrepresented (UR) individuals include the lack of 1) integrated student support activities into a cogent holistic approach, personalized to UR students and 2) meaningful exposure to inclusive care for underserved populations. Students from UR backgrounds often feel a profound sense of exclusion when entering a university setting. Cultivating a sense of belonging nurtures feelings of acceptance, self-respect, and personal value, and aids in the development of a professional purpose and identity. Evidence supports the positive influence of peer support, proactive mentoring, and interactive learning activities. Taking these observations to heart and to actualize the Inspired Academic and Career Success cornerstone of the UA Nursing Inclusive Excellence project, we developed an innovative Career Advancement and Transition (CAT) program.

Purpose: The specific purpose was to develop and implement a skill-based learning CAT program to be implemented as complementary to the formal academic curriculum and ensure/enhance the academic/career success of UR students.

Approach: The CAT program was designed to buffer the negative impact of historical stereotypes, bias, and discrimination and was guided by the *UR Scholar Growth* model comprising *Personal, Career, and Academic* concentrations. *Personal Growth activities* included monthly sessions focused on integrative health practices for self-care/wellness and strengthening a Growth Mindset. Sessions were 'hands-on' with expert facilitators. Group activities reinforced social belonging. For *Academic Growth*, academic success skill building workshops were hosted regularly, and personal tutoring services were provided as needed. To build *Career Growth,* students interacted through engagement panels and presentations with nurse leaders in the community and doctorate faculty. Students completed a CV/resume workshop. Skills were practiced by attending or presenting at professional conferences with faculty mentors. All Growth areas were strengthened through peer mentoring networks, dedicated experienced faculty mentors, and a summer intensive program for fostering critical thinking, clinical skills, writing, math, self-care, professional development, and academic success strategies. During the summer intensive program, students engaged in community-based experiential training (CBET) in diverse communities throughout Arizona to build a stronger sense of inclusive care for diverse populations.

Outcomes: To date, the program has supported 130 UR students, with 78 graduates now in the workforce, and resulted in 11 professional presentations at national and regional conferences (5 of which included students). In total, 14,479 training hours have been delivered and the NCLEX first time pass rate for supported students is 98%. Over 2,000 hours in CBET have been provided at free health clinics at the U.S./Mexico border, tribal health clinics, migrant shelters, and assisted living centers. In addition, our student scholars were directly involved in delivering 550 COVID-19 vaccines for migrant families, and 3,000+ COVID-19 vaccines for the Navajo Nation. Survey data reveals that students are motivated to seek employment in underserved communities. Further, students reported increased academic engagement, sense of belonging, and strengthened professional and cultural identity.

Conclusion: The CAT program has addressed educational and social gaps for UR student scholars and is achieving high-functioning nursing graduates. Participants show heightened resilience in both their academic and personal lives.

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ADVANCING FOUR CORNERSTONES OF INCLUSIVE EXCELLENCE IN NURSING ACADEMIA

Inclusive Excellence in Academia: Harmonized College Culture and Citizenry

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Background: Faculty behavior influences student perceptions and overall college workplace ambiance. As part of our inclusive excellence (IE) project, we recognized the need for a faculty educational initiative. This was catalyzed by findings from surveys completed by U of Arizona Nursing faculty, staff, and students that revealed deficiencies in: 1) community cohesion and belonging, 2) respect for differences, 3) addressing microaggressions, discrimination, and bias, and 4) competencies for inclusive pedagogical practices. Encompassing consistent self-reflection and self-critique, we chose to base this initiative on the concept of cultural humility (CH). To actualize the Harmonized College Climate and Citizenry cornerstone of our IE framework, we developed the *Collaborative Cultural Climate Conversion* (4C) initiative.
Purpose: The specific purpose of the 4C initiative was to create a faculty-focused education experience that would build faculty CH competencies and shift our college culture, pedagogy, and learning environments toward greater IE.
Approach: As the 4C design team, we began by immersing ourselves in defining CH and clarifying views on behavioral manifestations that could underlie the assessment of culturally humble competence. We shifted from using the common *rote learning* strategies toward using *discovery learning strategies,* based in constructivist learning theory. We shifted from a content-centric curriculum to a more process-centric one. Therefore, we reduced the amount of pre-determined expert-derived knowledge presented and enhanced learning by guiding participants to elicit their own insights and experiences to induce an internalized view of their own CH status and what would strengthen it. We determined that an initial step to cultivating CH is reflective thought, a cognitive learning strategy that is not widely practiced but it became a crucial component of the 4C. Further, we shifted from using the usual deductive case discussion problem-analysis approach toward an inductive inventive approach through scenario-building. As a format, we chose both synchronous group work (on Zoom) and asynchronous self-study/reflection on our learning management system. Each module began with real-time collective dialogue, followed by guided self-study/reflection and a return to collective dialogue, which ended with a collective assessment of the learning impact achieved through group participant polling.
Outcomes: Outcomes include a 4C program composed of three multimodal faculty development educational modules, each requiring three to three and one-half hours of contact time for a total of 10 hours. Completed modules have scaffolded learning emphases, starting with 1) CH: Knowing Oneself, 2: Harnessing CH for Inclusive Climate Change, and 3) Leveraging CH for IE within Pedagogy and Learning Environments. Each module illustrates highly augmented active learning and inventive opportunities. Preliminary data shows positive participant engagement and satisfaction at 4C end and college culture and citizenry embracing the value of enhanced cultural humility. Ongoing evaluation of impact includes plans for periodic observational ratings of classroom environments.
Conclusion: Cultivating CH in nursing faculty is fostering an increasingly hospitable College environment for citizens representing ever more diverse characteristics.

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Building a Comprehensive Evaluation Process for an Innovative NP Residency Program

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Purposes/Aims: The Advanced NP-PRACTICE (Primary care Residency in Addiction, Chronic care, Telehealth, Improvement science, Collaboration and Equity) NP residency program was initiated in July 2020 to accelerate the competencies of newly graduated NPs to provide excellent primary care services to patients in under-resourced areas. Graduates of this 12-month residency will enter the workforce with a strong interest in caring for the underserved along with improved competence and confidence in their primary care knowledge and skills. The purpose of this symposium is to present an innovative, comprehensive framework for the evaluation of a 12-month primary care nurse practitioner residency program.

Rationale/Background: The UC Davis service area spans 65,000- square-miles and includes 33 mostly rural and medically underserved counties with 6.1 million ethnically, culturally, and linguistically diverse residents and a significant shortage of primary care providers. The Advanced NP-PRACTICE program was designed to graduate a diverse cohort of NPs with strong clinical and practice management skills to work in low resource areas to address these shortages. A critical component of the program was to design a multi-level, multi-method, multi-dimensional comprehensive evaluation program that would allow the program to integrate continuous quality improvement, while also creating the ability to conduct longitudinal analyses and compare individuals and cohorts over time.

Brief Description: We established multiple levels of both quantitative and qualitative methods to evaluate individuals (NP residents, preceptors, educators), assigned clinical sites, educational content (lectures, discussions, case studies, simulations), NP leadership activities, and the overall program. NP residents completed a wide-ranging self-assessment of their knowledge and skills at baseline and quarterly thereafter. They also entered reflections in their online journals. We used the retrospective pre/post evaluation process for all educational sessions that also collected qualitative feedback. NP residents and preceptors evaluated each other each quarter. We set progressive productivity targets and collected visit data from residents and quarterly productivity reports from the clinics. NP Residents also completed a survey and participated in a focus group to evaluate the program at the end of the 12 months

Outcomes Achieved: We developed a comprehensive framework for evaluating the program at the individual NP resident level along with evaluation of all educational content and an overall programmatic evaluation. NP competency was evaluated at baseline and quarterly through self-assessment and reflective journaling and was aligned with preceptor feedback and productivity data to provide an overall picture of competency and readiness for practice. An end of the year survey and focus group provided a comprehensive view of the overall program success.

Conclusions: We successfully developed qualitative and quantitate evaluation processes at the individual participant, educational session, and programmatic levels for this innovative NP Residency program. Overall, the data collected allowed program directors to quickly revise the program along the way, particularly for the education sessions, and to improve program processes for the incoming cohort.

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BUILDING A COMPREHENSIVE EVALUATION PROCESS FOR AN INNOVATIVE NP RESIDENCY PROGRAM

A Comprehensive Evaluation and Reflective Process for NP Resident Education

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Purposes/Aims: Comprehensive program evaluation of educational outcomes is critical for novel NP Residencies. Evidenced-based methods of evaluation were utilized in a NP Residency program including pre/post surveys of curated educational sessions to gage enhanced clinical competence and confidence and reflective journaling with mentor feedback.

Rationale/Background: Accelerated transition of new graduates to NP practice benefits from addressing gaps in advanced skills and complex patient care management. Residents seek broader depth and breadth of training in advanced skills and practice to feel competent or seek enhanced confidence from supportive mentoring. Curated educational content and structured mentoring strategies meet both needs in concept but require evidence-based evaluation tools. Pre/post self-assessment of educational session content measures resident confidence and confidence in specific content areas and relevance for integration into clinical practice. Reflective writing prompts incorporate essential elements of NP role transition and provide mentorship by the NP education director. Writings allow identification of individual needs for content and skill support.

Methods: Residents provide a baseline self-assessment of perceived readiness for practice. Curated live onsite and virtual synchronous educational sessions provide advanced clinical didactic, procedural, and patient management knowledge and skills training. Retrospective pre/post self-evaluations for competency and confidence are completed for each session. Traditional pre/post evaluations are known to introduce response-shift bias, which happens when learners change or recalibrate their point of reference or self-evaluation evaluation criteria due to the intervention. This recalibration often results in a sizable underestimation of the true results of the intervention. Retrospective pre-post tests are self-evaluations that are believed to decrease response-shift bias to more accurately identify if learning took place.

Online written reflections to focused prompts are structured to promote the 3 levels of reflective writing: “Highly personal” relating feelings, “Mid-ground” reflecting upon clinical experience, and “Academic” reflecting upon program educational content and practice integration. Prompts are guided by NP competencies and role transition from novice to expert.

Outcomes Achieved: Pre/post self-assessment of resident competency and confidence in response to program educational offerings demonstrated significant effectiveness. In general, pre-evaluation of competency and confidence ranged from 20-40%, while post evaluations ranged from 85-100%.

Reviewed written reflections proved to be highly informative for resident role transition, clinical integration of program content delivery and revealing resident support needs and expectations. Prompts were initially provided weekly but were burdensome and were revised to monthly assignments. This was achieved with nearly 100% response to prompts and demonstrated the 3 critical elements of evidenced-based reflective writing.

Conclusions: Comprehensive evaluation of a novel innovative NP Residency program is critical for achieving the stated goals of accelerating new graduate role transition through curated educational and advanced skills sessions. Use of a retrospective pre/post educational session self-assessment tool demonstrates enhanced competence and confidence in the clinical NP role. Self-assessed clinician competence and confidence are critical elements of NP role transition from “nurse” to primary “clinical provider” with impact upon patient safety, practice efficiency and NP retention. Reflective journaling has provided a valuable platform for NP Resident expression of well-being in the growth from nurse to NP clinician.

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BUILDING A COMPREHENSIVE EVALUATION PROCESS FOR AN INNOVATIVE NP RESIDENCY PROGRAM

Using Productivity Data to Track Goals in an Innovative NP Residency

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Purposes/Aims: The Advanced NP-PRACTICE NP residency program was initiated in July 2020 to accelerate the competencies of newly graduated NPs. One of the main goals is for graduates of the 12-month program to accomplish set productivity goals that increase over time. This presentation describes how we used productivity reports to track clinical practice goals for 10 NP residents with placements at 10 distinct sites.

Rationale/Background: Given the shortage of primary care providers, the Advanced NP PRACTICE program was designed as a community-based NP residency with one continuity clinic site at the academic health center and nine others in federally qualified health centers (FQHCs) throughout the region. Studies show there is wide variation across different types of organizations in NP productivity, so tracking and measuring provider productivity goals was an essential evaluative component for the program to better understand trainee progress.

Brief Description: Providing care for rural and underserved populations is complex and can be challenging for new NPs transitioning to practice in rural and underserved settings. New NP's are often overwhelmed and unable to carry the expected full patient care load when serving these populations. Therefore, the NP residency clinical curriculum was designed to build on the existing knowledge and skills of new graduates and provide intensive, progressive ramp-up of clinical experience and professional responsibility. We obtained quarterly productivity data reports from all clinical sites to track progress. However, the first reporting cycle revealed the challenge of having reports that could not be merged because each site used different Electronic Medical Record systems and shared different data points. In response, we developed a standardized template for productivity reports, which allowed us to obtain comparable data for all sites, including patient counts and CPT codes for visits.

Outcomes Achieved: We used the quarterly productivity reports to assess how closely each NP resident followed the ramp-up schedule and intervened if the productivity fell too far above or below productivity goals. For example, initially, we uncovered that a clinical site increased the patient load too rapidly requiring the NP program director to resolve with the clinical site leadership. Expected productivity for total visit counts range in the first quarter 120 – 180 (mean =150) vs actual 60 – 150 (mean = 105); for the second quarter 360 – 504 (mean= 432) vs actual 130 – 414 (mean= 272). We learned the wide variation was due to NP resident patient visits coded and billed under their preceptor because some sites used shared patient panel models, rather than assigning the NP resident their own.

Conclusions: Creating a standardized template for productivity reports allowed better understanding of how each NP resident is following the progressive schedule and intervene when needed. Additionally, the standardized productivity data uncovered other factors that affect productivity measures like empanelment models, patient panel complexity, and clinic patient volume. We are exploring models to adjust the data, so it reflects the complexity of each clinical site and more accurately reflects actual NP productivity.

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BUILDING A COMPREHENSIVE EVALUATION PROCESS FOR AN INNOVATIVE NP RESIDENCY PROGRAM

A Unique Bi-Directional Feedback Process for NP Residents & Preceptors

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Purposes/Aims: The Advanced NP-PRACTICE NP residency program was initiated in July 2020 to accelerate the competencies of newly graduated primary care NPs to provide excellent primary care services to patients in under-resourced areas. The purpose of this presentation is to describe a bidirectional clinical practice evaluation process between the preceptor and resident.

Rationale/Background: The UC Davis service area spans 65,000- square-miles and includes 33 mostly rural and medically underserved counties with 6.1 million ethnically, culturally, and linguistically diverse residents and a significant shortage of primary care providers. The Advanced NP-PRACTICE program was designed to graduate NPs with strong clinical and practice management skills to work in low resource areas to address these shortages. Feedback in the clinical setting was identified as an important component of the evaluation framework. Feedback has been shown to support effective decision making, encourage self-reflection and motivate learners toward growth.

Methods/Process: When developing the clinical evaluation process, a multi-prong, bidirectional approach was identified by the clinical work group. Priorities included opportunities for self-reflection and feedback for both preceptors and residents, as well as a short, efficient format. After review of several evaluation forms and processes, the following quarterly process was developed. Residents complete a shortened version of the baseline comprehensive self-assessment, which allows residents to see their progress over time and for the program to identify areas of growth or identify problems. These can be addressed either individually or by the addition of targeted education sessions. Preceptors complete a short evaluation of residents and residents evaluate preceptors. The evaluation of preceptors gives residents opportunities to practice giving professional feedback and provide professional development for preceptors. Evaluations are submitted through our residency learning management system. Results are only released for the other to see once both parties have submitted their respective evaluations. Residents and preceptors are asked to schedule a dedicated time to review together. Evaluations are also reviewed by the residency faculty to identify any areas of concern that would require further intervention.

Outcomes Achieved: The evaluation completed by the preceptor includes 19 multiple choice questions divided among 4 categories, 1) clinical competency, 2) patient/family centered, culturally competent care, 3) interprofessional team-based care, and 4) professionalism. There are 2 free text questions that asks for areas of strength and growth. The residents complete a 13 multiple choice question survey with questions in four categories, 1) precepting, 2) procedures, 3) chart review and 4) general contributions. There are 2 free text questions that asks for areas of strength and growth. Preceptors and residents consistently complete the quarterly assessments and meetings. In general, the majority of preceptors and residents are aligned in the resident progress.

Conclusions: The bi-directional feedback between the NP residents and preceptors allows for a structured opportunity to share progress and identify any areas of concern so that the team can make adjustments as needed. The quarterly timing allows for a reasonable period of time for progress to be made. Both residents and preceptors have been satisfied with the process.

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CREATING PROGRAMS TO SUPPORT CLINICAL NURSING SCHOLARSHIP IN A LARGE HEALTH SYSTEM

Creating Programs to Support Clinical Nursing Scholarship in a Large Health System

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Purpose: To describe programs available across one large hospital system to engage nurses in research and evidence-based practice (EBP) activities.

Background: It is imperative for acute care nurses to implement EBP and research to support optimal patient safety and satisfaction outcomes. Not only is "participation in scholarly inquiry as a team member," a competency for entry-level nursing professionals, this skill set is required for receiving and maintaining the prestigious Magnet® nursing excellence designation. Successful implementation of a scholarship project necessitates an understanding of literature search and appraisal skills, protocol development and regulatory oversight of clinical inquiry work, data analysis and interpretation, and dissemination. Yet, nurses report inadequate knowledge of and confidence in implementing the clinical scholarship process from start to finish.

Methods: Nurse scientists, professional development specialists, and librarians from a large, Magnet®-committed hospital system spanning seven states and 50 hospitals met in 2021 to assess current programs available to support nursing involvement in EBP and research activities and identify need for new programs. Efforts focused on providing equitable opportunities for nurses across the system to learn about the research and EBP process and successfully implement, assess, and disseminate scholarly projects. Five programs were identified and offered in 2022 to nurses either on a regional basis to pilot-test the content, or to all nurses across the system, via a variety of modalities including on-demand learning modules, asynchronous discussion boards, and live-streaming virtual classes.

Findings: To support literature search knowledge, a 90-minute, live-streaming PubMed 101 and Library services 101 course were created for nurses across the system and taught by health science librarians. To refine literature appraisal skills, a monthly virtual journal club was assembled and nurses across the system were invited to participate. To address nursing knowledge of regulatory oversight of clinical inquiry work and increase scholarship outputs, a monthly, 4-hour, live-streaming Research Basics 101 including 3 hours of on-demand, pre-class work, was expanded and made available to any nurse across the system. To assess nursing demand for programs offering descriptive and inferential data analysis and interpretation assistance, a monthly, 60-minute Stats Lab, including on-demand online videos and handouts, was developed and pilot-tested among nurses working in one, 11-hospital region within the system. Finally, to mentor nurses through dissemination, a monthly, 90-minute, live-streaming Abstract Writing 101 course was created and offered to nurses working across the system.

Conclusions: In a large health system committed to Magnet® designation, five programs were created or expanded to create programs enhancing nurse knowledge and confidence in engaging in EBP and research activities. In the year 2022, over 350 unique nurses across the system enrolled in at least one of the programs, and more than 115 completed at least one program. In the symposium, we will evaluate each program and discuss strategies to facilitate adoption of these programs by other health systems. By providing these tools and resources, clinical nurses may be more prepared to lead and implement EBP and research projects that will benefit improved patient outcomes.

CREATING PROGRAMS TO SUPPORT CLINICAL NURSING SCHOLARSHIP IN A LARGE HEALTH SYSTEM

Building Nurses' Literature Search Knowledge Using Electronic Databases

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Purpose: To increase nurse knowledge of electronic library resources and strengthen literature searching skills across a large health system.

Background: Entry-level professional nurses are expected to "understand basic elements of the research process" and "evaluate appropriateness and strength of evidence." Neither expectation can be met without literature search knowledge. Yet, because of the high volume and complexity of electronic databases, nurses report struggling to comprehensively and systematically identify high-quality evidence to inform specific clinical inquiry questions. A large 50-hospital health system offers employees a centralized online library with access to over two thousand journals and scholarly databases, including PubMed and the Cochrane Library, which can be accessed at work or remotely. The library is staffed with medically trained librarians who support nurses in navigating databases and identifying appropriate literature for clinical inquiry questions and projects. Despite this infrastructure, many nurses within the organization report lack of awareness and low levels of confidence utilizing these resources. In 2022, librarians worked with nurse scholars within the health system to address the literature search knowledge gaps through virtual library resource classes.

Methods: A working group of professional librarians developed two virtual courses: Library 101 and PubMed 101. Each class lasted 90 minutes, was held virtually on Microsoft Teams each quarter beginning in July 2022, and was led by a trained librarian. Course content was adapted from resources offered by the National Library of Medicine. Objectives from the Library 101 class included: locate the library website; recognize and navigate resources and services; identify resources to answer a clinical question; describe best practices for searching for evidence; and retrieve full-text articles. Outcomes for attending PubMed 101 were: describe at least two ways to search in PubMed; employ the Medical Subject Headings (MeSH) database; and construct search strategies in PubMed using keywords, MeSH vocabulary, and filters. Participants complete a post-test and evaluation. Participant responses were assessed descriptively.

Outcomes: By October 2022, Library 101 and PubMed 101 had eight and 18 attendees, respectively. Identified nurse roles included clinical, administrator, educator, care navigator, and research scientist. Although few participants completed the electronic evaluations, responses suggested that all learners understood how to access the library, find full text articles, and follow steps to build an effective search after course completion.

Conclusions: Effective literature search skills empower nurses to efficiently find evidence to inform best practice that may drive better clinical outcomes. Attending librarian-led, virtual literature search classes fostered understanding of library resource navigation and full-text article access among nurse participants across a large health organization. Next steps for this program will include enhanced marketing to increase participation in courses and validating that library search topics and skills presented are relevant for all nurses, including those in clinical roles.

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CREATING PROGRAMS TO SUPPORT CLINICAL NURSING SCHOLARSHIP IN A LARGE HEALTH SYSTEM

Outcomes Linked to a Hospital-Based, Virtual Nursing Research Basics Course

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Purpose: To measure the impact of a research basics course on self-reported nurse confidence, knowledge, and participation in clinical scholarship outputs.

Background: The ability to participate in clinical scholarship projects and disseminate findings is upheld as a competency for practicing nurses. As such, the prestigious Magnet® designation requires nurses at all levels to lead implementation of evidence-based practice (EBP) and research projects in their work settings. However, nurses report low levels of confidence and competence engaging in scholarly activities, and often report a poor understanding of the role of regulatory bodies such as the Institutional Review Board as a barrier to implementing projects. Thus, nurse scientists in a large health system collaborated to create and disseminate a virtual research training course to fill these gaps and increase nursing scholarship outputs including developing and implementing a project.

Approach: Starting early 2022, a "Research Basics 101" training course was offered to nurses working within one large health system. The hybrid course consisted of five online, self-paced modules (lasting 25-45 minutes each) and one virtual, 4-hour class. Module topics included: 1) Defining Clinical Scholarship, 2) Finding and Evaluating the Evidence, 3) Formulating a Research Question, 4) Research Methods, and 5) Data Collection and Analysis. The virtual class, offered monthly, focused on applying scholarship principles from modules from the start to finish of a project. Nurses completed electronic surveys and data were analyzed at two time points: baseline (pre-modules) and six months following the virtual class. Data included demographics, self-rated confidence, research knowledge, and scholarship outputs. Confidence in the scholarship process was measured with 13 items (not at all confident, 0, to completely confident, 4) with an average score calculated. Knowledge was assessed with 15 questions with scores ranging from 0 to 18 points. Scholarship outputs were measured with items indicating whether a nurse had participated in an EBP or research project in the prior three months. Paired samples t-tests measured differences in confidence and knowledge between the time points. Descriptive statistics tabulated proportional differences in reported scholarship outputs at each time.

Results: A total of 104 nurses completed the modules and 4-hour course by October 2022 with 19 providing matched baseline and 6-month follow-up data analyzed for this project. Participants represented all three divisions of the health system and were largely patient facing (n=15, 79%) with an average of 14 years of experience. Average confidence scores significantly improved from baseline (m=1.9) to six-month follow-up (m=2.6, $p<0.001$), and knowledge scores non-significantly improved from baseline (m=14.0) to follow-up (m=14.6, $p>0.05$). At 6-month follow-up, nurses reported increased external dissemination of research (n=3, 16%) and participation in EBP (n=6, 32%) compared to baseline (n=1, 5%, n=4, 21%, respectively).

Conclusion: Offering a hybrid research basics course to hospital-based nurses may increase confidence and understanding of the research process which can be sustained 6 months after course completion. With the application of these skills, nurses may improve clinical scholarship outputs, support Magnet initiatives, and positively impact patient and caregiver outcomes.

CREATING PROGRAMS TO SUPPORT CLINICAL NURSING SCHOLARSHIP IN A LARGE HEALTH SYSTEM

Enhancing Critical Appraisal of Literature through a Virtual Nursing Journal Club

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Purpose: To evaluate the impact of a virtual nursing journal club in improving nursing critical appraisal of research evidence.

Background: Nursing scholarly inquiry is comprised of systematically evaluating a known practice gap, then bridging the gap through application of existing or new knowledge. Critical appraisal of literature is a key precursor to implementation of clinically meaningful scholarship projects. Appraisal of scientific literature involves delineating reliability, relevance, and utility of the evidence presented. Nurses are expected to maintain a competency in “Evaluating appropriateness and strength of the evidence” as an entry-level professional. While literature appraisal skills are imperative for nurses to determine if study implications warrant a change to nursing practice, many working nurses report low levels of confidence and competence in critically evaluating literature.

Approach: In January 2022, a nurse research and scholarship council representing 50 hospitals in a large health system established a Virtual Nursing Journal Club (VNJC) offering 1.0 unit of continuing education for each session. The VNJC was divided into both a synchronous and asynchronous pathway to facilitate participation from nurses working busy, around-the-clock schedules. Synchronous events occurred every other month via the Microsoft Teams platform with a live speaker who facilitates critical appraisal of a selected article during the 60-minute session. The asynchronous event was hosted on Yammer for months without a synchronous presentation. On the Yammer platform, a nurse presenter posts an article and critical appraisal discussion questions. Participants are encouraged to read the article and engage in discussion board dialogue during the month. The nurse presenter monitored and responded to the discussion board to provide guidance. The Johns Hopkins Nursing Evidence-based Practice toolkit was used to teach critical appraisal skills including grading the level and quality of evidence, critiquing appropriateness of data analytic approaches, reporting the study in an evidence table, and articulating whether the evidence was strong enough to influence a change to clinical practice. An evaluation was distributed to participants after each session to measure self-reported improvement in knowledge appraisal.

Outcomes: Among 10 journal club events, nurse professional development specialists (n = 27), clinical (direct care) nurses (n = 26), nurse directors (n = 12), nurse managers (n = 11), and nurse scientists (n = 9) were among the 108 participants. On average, 132 participants viewed the asynchronous journal club Yammer postings, while an average of 8 officially commented and an average of 12 nurses attended each synchronous session. Post-data demonstrated participants self-reported an overall improvement to their knowledge of evidence appraisal.

Conclusions: Offering a virtual journal club to improve nursing knowledge of evidence appraisal was successful in one large health system. Additional steps for the Virtual Nursing Journal Club are to evaluate how participants have applied the critical appraisal knowledge to personal involvement in new clinical inquiry projects. Future efforts include increasing participation, particularly among direct patient care nurses by using multi-pronged communication strategies.

Virtual Statistics Lab Increases Nurse Confidence in Data Analysis and Interpretation

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Purpose: To create a virtual *Stats Lab* program focused on inferential data analysis and evaluation techniques using active learning principles and to assess pre-post changes in nurse confidence.
Background: Job descriptions for acute care registered nurses rarely requires application of data analytic and interpretation skills and most pre-licensure curricula offer little, if any, formal instruction on performing data analysis. However, data collection and interpretation are an expectation in several professional situations such as returning to school for an advanced degree or employment at an institution actively working on the *Magnet* nursing excellence designation. Furthermore, entry-level nursing professional competencies, defined by the American Association of Colleges of Nursing in the *Bachelor of Nursing Science Essentials*, explicitly state that nurses should be able to “evaluate research”, and “use appropriate data for planning care”. A needs assessment completed across 11-hospitals revealed institutional leadership supported nurse involvement in scholarship projects and demand for additional resources to facilitate data analysis from scholarly work existed.
Approach: Guided by the needs assessment, a nurse scientist and biomedical statistician developed and completed an initial pilot termed *Stats Lab*, consisting of a short survey and a one-hour statistics overview. Results from the pilot guided content for six bimonthly one-hour topic-focused educational activities. All sessions were created following principles of active learning and included information on using the topics in each step of the evidence-based practice process. Instructors began each activity with a 30 to 45-minute lesson followed by an open-forum for those in attendance to ask questions, discuss their own projects, and brainstorm with others. Prior to registering for any *Stats Lab* session, individuals were asked to complete a short pre-assessment and a post-assessment was shared toward the conclusion of each activity. Assessments contained questions relating to confidence with statistical concepts and desired content; the post-assessment also included a question on the usefulness of the educational activity.
Results: All portions of the pilot session were completed by eight nurses. Significant improvements in confidence from pre- to post-assessment for “completing statistical analyses” and “running necessary analyses” (p=0.05 and p=0.02, respectively) were found. Numeric pre-post improvements were noted for “understanding data”, “selecting proper analyses”, and “interpreting results”. The average “usefulness” score (one to 10 analog scale) for the initial activity was 8.9 (SD=1.9). Similar results were noted for the six topic-focused sessions (n=24) with attendees showing a significant improvement in their confidence related to “completing statistical analyses” (p=0.007) with additional numeric improvements found for all other objectives. Average “usefulness” scores were found to be 8.3 (SD=1.6) and remained high for all topics (Mean Ranges: 7.7 to 9.5).
Conclusion: Results from the *Stats Lab* activities support that participation in one-hour, virtual statistics workshops can increase nurse confidence in performing data analysis. Data analytic infrastructure is important to meet needs for nurses to grow their careers, strengthen competencies in evaluating research, and integrate data analytics skills supporting prestigious *Magnet* nursing excellence designation. Future work will include expanding these data analytic workshops to nurses working across the health system.

CREATING PROGRAMS TO SUPPORT CLINICAL NURSING SCHOLARSHIP IN A LARGE HEALTH SYSTEM

Evaluation of a Virtual Abstract Writing Workshop for Registered Nurses

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Purpose: To evaluate a virtual workshop to mentor nurses in dissemination of a scholarly abstract.

Background: The American Nurse Credentialing Center's Magnet® recognition for hospitals promotes high-quality patient outcomes and a culture of nursing excellence. As part of this prestigious award process, registered nurses are required implement evidence-informed projects and disseminate findings in scholarly settings. Additionally, communication of scholarly findings is a requirement for entry-level professional nursing education as defined by the American Association of Colleges of Nursing in the Bachelor of Nursing Science Essentials. While undergraduate nursing programs recognize the need to teach basic principles of evidence-informed clinical scholarship, curricula are not always designed to engage students in peer-reviewed dissemination activities. Thus, nurses report low levels of confidence disseminating findings in a scholarly way. In 2021, nurse scientists and professional development specialists on a conference planning team in one large, 7-state health system noted few nurses submitted an abstract to the annual system-wide nurse research and scholarship virtual conference over time. To bridge this confidence gap and promote dissemination of scholarly work, the conference planning team created and offered a virtual abstract writing workshop for registered nurses.

Methods: In 2021 and 2022, a "Writing an Abstract 101" virtual workshops were offered to nurses in the system. The 1.5-hour course included didactic and break-out group sessions to critique an abstract. Afterwards, participants were sent an evaluation including a Likert-scale confidence question: "After attending this class, I am more confident submitting an abstract according to the specified guidelines for the organization where I want to present my work". Options ranged from 0 (strongly disagree) to 10 (strongly agree). Finally, the number of abstract submissions to the annual nurse research conference before and after the workshops were tabulated. Frequency and descriptive statistics were conducted to understand percentages of nurse participants, average nurse-reported confidence in dissemination following class offerings.

Assessment of Findings: In 2021, a total of 20 nurses participated in two pilot workshops but did not receive the formal evaluation. In 2022, 60 nurses enrolled in one of eight courses offered. Of these, 40 (67%) attended and 28 (70%) completed the post-workshop evaluation. After attending the course, the average confidence score was 8.8, reflecting high levels of self-reported confidence. The number of abstracts submitted to the system conference rose from 19 in 2020 to 38 in 2021 and 54 in 2022.

Conclusions and Implications: Within a health system, nurses were offered virtual education to enhance their confidence disseminating scholarly work. Participants reported high levels of confidence in abstract writing after course completion, and conference abstract submissions for the system conference increased, nearly tripling the volume from the baseline year without the course. These results support the need for continued offering of a mentored abstract training workshop to foster nursing dissemination. Increasing nursing confidence in dissemination through an abstract training workshop may support initiatives such as Magnet ® recognition and strengthen competency in communicating scholarly findings.

DESIGNING INNOVATIONS IN METHODS TO PRODUCE ACTIONABLE EVIDENCE FOR NURSING PRACTICE

Designing Innovations in Methods to Produce Actionable Evidence for Nursing Practice

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Purpose: The evidence is clear that RNs influence patient quality and safety outcomes. What remains unclear is how to organize and implement nursing knowledge and practice into care delivery models that consistently achieve national quality mandates. Variability across decades of observational study findings indicates the relationship is not as simple as ‘more nurses = better outcomes.’ This is because nursing care is complex, dynamic, and inherently context sensitive. There is growing consensus that inquiry into and evaluation of complex healthcare delivery systems, such as nursing care delivery, must move past traditional binary questions of efficacy and towards a more sophisticated exploration of generalizable conditions of beneficial outcomes.

Background: One emerging nursing care delivery model highlighted by policy makers is the Clinical Nurse Leader (CNL) care model. The CNL is an RN with masters-level competencies in clinical leadership, care environment management, and clinical outcomes management. The CNL utilizes these competencies as a member of the frontline clinical care staff to take the lead developing clinical structures and processes that improve care coordination, quality, and safety. Previous studies have determined the CNL care model’s feasibility to improve frontline quality and safety outcomes. However, those studies were of variable quality and lacked a consistent framework linking CNL care model structures, processes, and outcomes. Our program of research aims to characterize, measure, and explain the CNL care model’s implementation and effectiveness across diverse practice settings with the goal of producing actionable implementation and outcome evidence for the CNL care model, ensuring that the model can be successfully adopted within real-world healthcare settings to achieve safer and higher quality patient care.

Methods and Outcomes: The complexity of the CNL care model required innovative in the design, organization, and methods of our Agency for Healthcare Research and Quality funded study to generate its evidence base. Symposium abstract 1, titled “Describing a CNL Type 2 Hybrid implementation-effectiveness study” provides an overview of the methodologies developed, using a participatory approach, to examine the complexity of the CNL care model and its capacity to produce (or not) positive quality and safety outcomes. Abstract 2, titled “A Bayesian approach for modeling complex nursing care delivery data” describes a novel analytic procedure that was used with a structurally complex CNL dataset to predict the relation between CNL implementation components and its successful adoption (or not) within diverse settings. Abstract 3, titled “A novel two-stage inter-rater reliability methodology for qualitative data coding” describes our efforts to make visible the staged process by which multiple coders (1) come to agreement on qualitative data coding and (2) reach a threshold of agreement consistency in coding over time using heatmaps and bar graph visualizations.

Conclusions: Our research approach and methods capture configurations, or ‘causal recipes’ of relational elements that cluster into patterns of care delivery implementation associated with positive outcomes. Implications include a conceptual and empirical body of knowledge defining nursing’s specific contribution to healthcare quality and safety, and a more comprehensive understanding of the link between care delivery implementation and effectiveness.

Funding: Agency for Healthcare Research and Quality, 1R01 HS27181-01A1, Bender PI, 2020-2023

DESIGNING INNOVATIONS IN METHODS TO PRODUCE ACTIONABLE EVIDENCE FOR NURSING PRACTICE

Describing a National CNL Type 2 Hybrid Implementation-Effectiveness Study

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Background: Complexity refers to any system consisting of a collection of interconnected relationships and parts that are dynamic, multi-dimensional, and nonlinear. Complexity is difficult to map, to predict, and to mobilize. Implementation science deals with these challenges in its efforts to develop strategies that can bridge the gap between evidence-informed interventions and the complexity of contexts in which they are to be embedded. Participatory approaches become critical as implementation science acknowledges the complexity and relationality involved in adopting care delivery interventions, in terms of heterogeneous contexts and implementation strategies utilized. We report on the results of a hybrid type 2 implementation-effectiveness study using sophisticated methodologies that ‘capture’ complexity with the goal of identifying what works, when, and how for an emerging nursing care delivery intervention.

Methods: This study leverages a natural experiment in 66 clinical care units in nine hospitals across ten states in the United States that have implemented the Clinical Nurse Leader (CNL) care model. The CNL is an RN with masters-level competencies in clinical leadership, care environment management and clinical outcomes management and utilizes these competencies as a member of the frontline clinical care staff to take the lead developing clinical structures and processes that improve care coordination, quality and safety. To identify which competencies/practices lead to enhanced care unit adaptive functionality (successful implementation) and performance outcomes (high effectiveness), we used mixed methods (interviews, validated survey instruments, pre-existing outcomes data extraction) and novel analytic approaches (Bayesian multilevel regression, interrupted time series (ITS), qualitative comparative analysis (QCA) to adequately model complexity in terms of data structures, temporality, and the possibility of multiple evidence pathways from implementation to effectiveness. Survey and interview data allow for case comparisons of implementation strategies/success across national healthcare settings. ITS estimates outcome change point, change-point correlation structure and trajectory, and outcome variance pre-post implementation over time. QCA identifies necessary and sufficient CNL implementation configurations that achieve outcome effectiveness.

Findings: Results demonstrate nationwide feasibility of study recruitment and data collection procedures, developed through participatory approaches meeting both research and health system needs. We’ve confirmed the sensitivity of our novel ‘Robust-ITS’ modeling approach to detect the empirical change point in measured outcomes as well as changes in outcome score variability pre-post implementation, which to our knowledge is the first study able to reliably quantify outcome consistency pre-post intervention, an important sustainability outcome. Through Bayesian modeling we are determining which implementation components best predict successful intervention adoption depending on context. Through interrupted time series analysis, we are identifying implementation sustainability (or not) over time depending on context. Through qualitative comparative analysis, we expect to identify multiple (but not unlimited) evidence pathways from implementation to effectiveness, i.e., which strategies can make the intervention and diverse contexts compossible, or able to co-exist.

Implications: This study demonstrates that methods for capturing the dynamic complexity inherent to implementation of nursing care exist and can generate actionable knowledge about the constantly changing and evolving intersections of interventions and strategies that underlie the implementation of a complex nursing intervention in multiple dynamic contexts.

Funding: Agency for Healthcare Research and Quality, 1R01 HS27181-01A1, Bender PI, 2020-2023

DESIGNING INNOVATIONS IN METHODS TO PRODUCE ACTIONABLE EVIDENCE FOR NURSING PRACTICE

A Bayesian Approach for Modeling Complex Nursing Care Delivery Data

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Purpose: The purpose of this study was to identify predictive relationships between components of the Clinical Nurse Leader Practice Model and implementation success.

Background: Clinical Nurse Leader practice implementation is a frontline nursing care delivery system designed to increase care quality and safety with empirically validated implementation, practice, and outcome domains. Complex health system interventions like Clinical Nurse Leader (CNL) practice implementation have a multiplicity of variables that vary depending on implementation and contextual factors, requiring methodologies that address complexity. However, many health services research methods/analyses assume simplicity (variable independence) and normality (variables with standard distributions), which may not adequately capture predictive relationships, or can produce unrepresentative estimates and erroneous conclusions. Previous attempts to infer causality with the explanatory pathways of the CNL Practice Model have been limited by the nature and variability of the data associated with implementation of this complex nursing care delivery intervention. We describe a Bayesian multilevel modeling approach to predict the relation between implementation components of the intervention of CNL practice implementation and its successful adoption (or not) across diverse settings.

Methods: A psychometrically validated survey measuring domains and sub-domain components of the CNL Practice Model was administered in 2015 to a national sample of administrators and clinicians involved with model implementation across diverse settings. The dataset also included an implementation success measure. We modeled the complex hierarchical structure of the data using a Bayesian multilevel regression mixture modeling approach. A zero-one-inflated beta distribution (ZOIB), a mixture of Bernoulli distributions for the minimum and maximum responses and a beta distribution for the responses between the min and max, was used to fit the outcome rating.

Findings: 920 participants responded, 543 (59%) provided success scores. ZOIB model captured ratings skewed toward upper bound, while also adequately modeling data between the minimum and maximum values. ZOIB Bayesian model also converged and gave estimates for all hierarchical parameters, which would likely have failed to fit in a pure maximum likelihood framework. The analytical model determined components of the practice model best discriminating between lower and higher implementation success. Since Bayesian methods provide posterior probability distributions for each parameter in the analytical model, it was possible to propagate the uncertainty through the calculation of effects for each level of the data (domains, components, and items), which enabled us to provide uncertainty intervals for all estimates. The strongest predictors of successful implementation were components in the organizational readiness domain, specifically organizational level implementation strategy and consensus regarding CNL practice. Additional predictors were structuring of CNL practice at the microsystem level and the influence of CNL practice on teams and teamwork.

Implications: Analytic procedures assuming Gaussian response distribution would likely have inadequately modeled the data in this study, based on previous experience. Bayesian approaches can handle high levels of data structural complexity, hence adequately modeling features of complex data, thereby affording greater predictive utility, which is of interest to nursing and health services scientists.

A Novel Two-Stage Inter-Rater Reliability Methodology for Qualitative Data Coding

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Background: Qualitative data coding with multiple coders can improve study efficiency and quality if intercoder agreement and reliability can be established. Interrater reliability (IRR) is the extent to which variation in the coding of excerpts exists. Reliability can be considered the outcome of process of agreement; establishing a shared orientation to the data in such a way that coders agree on the assignment of specific codes to excerpted data. This reflects a staged process; agreement happens first, from which a 'norm' of consistency can be calculated. To make this staged process transparent, we developed a coding visualization methodology to assess coding agreement, then calculated a threshold of agreement. We used both techniques to periodically assess coding agreement and reliability over the course of the study.

Methods: Three independent coders applied a deductive coding scheme on 399 semi-structured interview transcripts from a hybrid implementation-effectiveness study using Dedoose 9.0.54. One coder designated a set of excerpts in a specific transcript comprising individual sentences or a 1-3 sentence string expressing a single idea. Then all coders assigned codes to each except independently. All coding was transformed into heatmap and bar graph visualizations in R version 4.2.1. Heatmpas demonstrated agreement for each transcript via converging color distributions. The threshold reliability metric was selected based on bar graphs of excerpts at three agreement levels: full (3 coders agree), partial (2 agree), and none.

Findings: 10 transcripts, 776 excerpts, and 5 pre-determined codes were used to develop and validate the methodology. Heatmap visualizations guided targeted discussions about variability in concept operationalization, helping coders understand and integrate others' perspectives when analyzing data. Bar graphs of distributions showed the range of agreement between 26.7% to 97.4%, with 82% of transcripts reaching a minimum of 89% agreement. Transcripts not meeting this designated threshold were recoded and reassessed. Both techniques were used iteratively to assess coding agreement and reliability over the course of the study.

Implications: We found this ongoing 2-step approach created broader interpretive scope while at the same time stronger coding agreement across all 3 coders. by tracking realtime agreement through heatmaps along with audits confirming designated threshold reliability. These standardized procedures transparently assessed each step, ensuring both agreement and reliability were objectively addressed, thus adequately mitigating concerns of subjective or biased analyses across multiple coders.

Overview: Fetal Exposures and Infant Psychobiological Development

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A growing body of research suggests that the fetus is influenced substantially by the environment within as well as outside the womb. Evidence indicates that varied environmental exposures can affect core areas of fetal development that are foundations for later physical and mental health. Trillions of cells are generated during gestation; they organize, connect and specialize as gestation proceeds. These cells form the basis of structures and functions that play key roles in determining resilience or vulnerability to health problems after birth. Exposure of the fetus to an adverse physical or psychological context can elicit perturbations in normal cellular development that underlie an individual's genetic, microbial, neuroendocrine, and autonomic nervous system structure and function, as well as other areas of psychobiological development. These effects can 'program', that is, significantly influence or channel the trajectory of health outcomes. Fetal programming theories, such as cumulative stress, psychosocial, match-mismatch and epigenetic models, will be discussed in the symposium. While these models all address the important interface between psychological and biological factors, they propose different mechanisms by which fetal exposures become biologically embedded and mediate the psychobiological development of infants after birth.

The symposium will include four presentations. Each one will address an important component of psychobiological development: the telomere system, the hypothalamic-pituitary-adrenal axis, the gut-brain axis, and the autonomic nervous system (ANS). Various fetal exposures will be described as they relate to infant psychobiology, including air pollution, maternal stress and depression, and both maternal and synthetic glucocorticoids. Fetal programming will be discussed as the framework for all research aims and the interpretation of results. Each presentation will leverage the same diverse sample of 181 women and infants but will describe distinct research aims, methods and findings. Women were recruited during their third trimester of pregnancy. Mothers and infants were then followed and assessed with multiple measures from birth to 1 year postnatal.

In line with the conference theme, presentations will highlight an array of technological approaches. These will include oscillating devices that measure pollution-related particulate matter in the air, enzyme immunoassay technologies and spectrophotometry to measure the concentration of cortisol, 16S rRNA gene sequencing technology to identify microbiota taxa and species, polymerase chain reaction-based technology for assay of telomeres, and electrocardiography to measure heart rate variability (ANS responsivity) through electrical activity of the heart.

The symposium will provide valuable knowledge for nurse scientists across all fields. The research presented has clear relevance for nurses in obstetrics, neonatology, pediatrics, mental health and environmental health. However, conceptual and methodological content regarding stress and stress hormones, the microbiome, telomere biology, and heart rate variability (along with their related technologies) are pertinent throughout nursing science.

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Effects of Prenatal Air Pollution and Maternal Depression on Newborn Telomere Length

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Background: Telomeres are an important indicator of chromosomal integrity and genomic stability. They are the caps at the end of chromosomes made up of nucleotide sequences and specialized proteins, with a crucial role in protecting chromosomes from erosion when individuals are faced with stressors and other environmental adversities. Shorter telomere length has been related to worse health outcomes over time, with the length of newborn telomeres laying a foundation for chromosomal protection. Among a variety of influential factors, air pollution has been linked to telomere length. However, results of studies are mixed regarding the direction of the relationship between increased pollution and telomere length. Similarly, research overall indicates that depression is associated with shortening of telomeres. Nonetheless, scarce research has addressed the combined effect of pollution exposure and maternal depression during pregnancy on telomere length of newborns. Fetal exposures may have substantial effects on the programming of telomeres, influencing their high degree of variability among newborns during this critical window of vulnerability. The purpose of this study was to examine the association of prenatal exposures to ambient particulate matter and maternal depression during pregnancy to newborn telomere length, controlling for potential confounds of maternal age and infant sex.

Methods: Pregnant women (n=74) were recruited in obstetric clinics during their third trimester. They completed a sociodemographic questionnaire and the Patient Health Questionnaire-9 to assess depression. After birth, a salivary sample was collected from the infant which was used to extract genomic DNA for telomere assay. From these assays, we determined T/S ratios, a standard approach for identifying telomere length. We calculated four air pollution measures, including the average PM2.5 exposure over pregnancy and estimates for each clinically defined trimester (1st trimester: 1–13 weeks, 2nd trimester: 14–27 weeks, 3rd trimester: 28 weeks-delivery) with data acquired from public records of the air quality control district for each woman's residential area. Multiple linear regression was used to analyze the aims.

Results: The final regression model indicated that average PM2.5 exposure across pregnancy (B=.029, p=.000), increased maternal depressive symptoms (B=.006, p=.025), and maternal age (B=.004, p=.032) had a significant positive association to telomere length. In addition, male infants had significantly shorter telomeres than female infants (B=-.072, p=.008). The variables in the model contributed to 34% of the variance in telomere length (F=10.58, p=.000).

Conclusions: Findings indicate that exposure to greater air pollution and increased maternal depression during pregnancy are related to longer telomeres among newborns. Although adversity has been linked to shorter telomeres in some studies, our findings support research that links cancer and other disease risks to longer telomeres. Both environmental pollution and depression contribute to enhanced inflammatory processes, potentially inducing systemic inflammation in the developing fetus. Further research is needed to examine the mediating effects of inflammatory markers in the relationship between these fetal exposures and newborn telomere length. Potential epigenetic alterations should also be evaluated. Results indicate the need for depression assessment of women in regions known for high pollution as part of obstetric nursing care.

Fetal Exposure to Antenatal Corticosteroids and Infant Cortisol Regulation

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Background: Administration of antenatal corticosteroids (AC) is the standard of care during pregnancy for women who are at risk of early delivery. Evidence indicates that AC improve survival and reduce morbidity for preterm infants. However, research suggests that infants exposed to AC as fetuses have an altered hypothalamic-pituitary-axis (HPA) response to stressors in early life. Results are mixed regarding the nature of these effects, with studies showing both suppressed and augmented HPA activity. Dysregulation of the HPA axis could impact an infant's vulnerability to stress, leading to long-term health consequences. The purpose of this study was to determine if AC exposure was associated with infant cortisol levels in a resting state or in response to a stressor at 1, 6, and 12 months postnatal. We also evaluated the moderating role of preterm birth in this association.

Methods: Women at risk for preterm labor were recruited from two ObGyn clinics during the 3rd trimester of pregnancy. Data on AC exposure was extracted from the medical record after birth. At 1, 6, and 12 months postnatal, salivary samples were collected from infants to examine their cortisol levels before and after participation in a 'stressor protocol'. Mothers completed the Perceived Stress Scale and provided salivary samples for cortisol assay at enrollment and again at 6 and 12 months postnatal. These data were included as covariates in addition to gestational age, maternal obstetric risk, and neonatal morbidity data extracted from the medical record. Mixed effects multilevel regression modeling was used to examine the aims.

Results: 181 women and their infants participated in the study and represented diverse racial and ethnic backgrounds (e.g., 23% African American/Black, 24% Hispanic/Latinx, 19% Asian American). 51% of infants were born preterm, and 39% had been exposed to AC during gestation. Infants exposed to AC had significantly lower resting state (B = -2.47, CI: -3.691, -.0484) and post-stressor (B = -2.51, CI: -4.283, -.4276) cortisol levels across the first year of life than infants who were not exposed to AC. There was no moderating effect of preterm birth on the relationship between AC exposure and cortisol.

Conclusions: Results indicate a state of dampened HPA activation and cortisol hypo-arousal that persists across the first year of life among infants exposed to corticosteroids in utero. These findings support previous evidence of an association between AC exposure and suppressed cortisol levels, and add new evidence of persistence of this suppression through 12 months of age for those exposed to AC.

Implications: Findings warrant careful consideration by nurse midwives and other perinatal clinicians of the benefits and risks of prescribing AC. This knowledge may also contribute to neonatal and pediatric nursing care through an improved understanding of stress dysregulation in at-risk infants, and the development of strategies to mitigate its potential adverse outcomes. Future investigations by nurse scientists should include an exploration of mechanisms responsible for alterations during development of the fetal HPA axis, including epigenetic and biochemical factors that control hormonal secretion, negative feedback, and glucocorticoid receptor function throughout the HPA axis.

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Distinct Prenatal Stress Symptoms Have Unique Associations to the Infant Microbiome

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Aims: Emerging research suggests that prenatal stress may alter development of the fetal microbiome. However, studies have not examined whether specific symptoms of stress have unique associations with the infant's microbiome. We examined whether distinct clusters of women's stress symptoms predicted characteristics of their infants' microbiome at one month of age.

Methods: Sixty women and their future newborns were recruited during the third trimester of pregnancy. Women completed demographics and Cohen's Perceived Stress Scale at recruitment. A stool sample was collected from the neonate at one month of age. Data on potential confounds (e.g. gestational age) were extracted from the medical record to control for their effects. 16s rRNA gene sequencing was used to identify diversity of species, along with specific indices to measure richness, evenness, and phylogenetic diversity (PD) of microbial species. Multiple linear regressions were employed to examine the aims.

Results: A cluster of symptoms indicating 'emotional distress' was related to less richness (β = -.34, p=.02) and less PD (β =- .33, p=.03) of the infant microbiome. In contrast, a symptom cluster reflecting 'inability to cope with stressors' was associated with greater microbial richness (β = .43, p=.01) and more PD (β = .42, p=.01).

Conclusions: Different prenatal stress symptoms may have uniquely different effects on the developing fetal microbiome. Further research is needed to identify mechanisms underlying differential effects of varied symptom clusters. Nursing assessment of specific stress clusters during prenatal care could inform targets for intervention among high risk women that would increase optimal development of the fetal microbiome.

Implications of Pregnancy Stress and Cortisol for Infant Heart Rate Variability

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Background: There is growing evidence that maternal stress during pregnancy may influence the child's ability to manage stress after birth. However, mechanisms underlying effects of stress on infant stress regulation are not clear. Difficulty managing stress is mediated by alterations in the hypothalamic-pituitary-adrenal (HPA) axis or the autonomic nervous system (ANS). Heart rate variability (HRV) is a well-established, noninvasive measure of ANS function and reliable marker of stress regulation. HRV provides measures of sympathetic (SNS) and parasympathetic function with its various metrics. Both psychological and physiological stress (e.g. cortisol) have been linked to changes in HRV. However, no previous research has examined the differential relationships of prenatal perceived stress and cortisol to HRV of neonates. The purpose of this study was to examine the relationship of maternal perceived stress and cortisol during pregnancy to neonatal HRV.

Methods: Women were recruited from obstetric clinics affiliated with the UCSF Health System during the 3rd trimester of pregnancy. They completed the Perceived Stress Scale and a measure of actual stressors experienced over the prior 6 months (CRISYS). They also provided 8 salivary samples over a 2-day period for later enzyme immunoassay (ELISA). Cortisol area under the curve (AUC) was used as the metric to identify women's overall cortisol concentration. Infants participated in a standardized stressor protocol at one month of age during which electrocardiographic data was collected throughout a baseline resting period, the stressor, and a post-stressor period. ECG data was cleaned for artifact and metrics were computed using software from MindWare Technologies. HRV metrics included high frequency (HF), low frequency (LF), and the LF-HF Ratio at baseline and the post-stressor period. Information was extracted from the electronic medical records to complete a measure of neonatal morbidity. Multiple linear regression was used to examine research aims.

Results: Findings indicated that the LF-HF ratio of HRV was the most salient measure of infant ANS activity. Significant results were found for this measure during both the baseline and post-stressor periods. In addition, women's cortisol concentration was a more salient predictor of the LF-HF ratio than was women's perceived stress. Higher prenatal cortisol concentration was associated with a higher infant LF-HF ratio both at baseline (B = .34, p=.02) and in response to the stressor (B = .45, p=.003). In contrast, perceived stress showed only a trend toward a significant relationship.

Conclusions: The LF-HF ratio reflects the degree of sympathetic versus parasympathetic dominance of the ANS. Results indicate that fetal exposure to more extensive prenatal cortisol is associated with greater infant SNS activity both at rest and in response to a stressor. Starting life with a predisposition to greater SNS activity may lead to adverse health outcomes for the child since it has been linked to later cardiovascular, immune system, and other health problems. Measuring and monitoring women's cortisol during pregnancy may be important so that nursing interventions can be implemented to manage its effects. Assessment of infant sympathetic activity may also be warranted so that interventions to improve stress regulation can be provided.

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Inclusive and Equitable Strategies in Nursing Education: Symposium Overview

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Purpose: This symposium presents five innovative projects that address various aspects of creating inclusive and equitable learning environments.
Rationale/Background: The Future of Nursing 2020-2030 Report (National Academy of Sciences, 2021) identifies a diverse nursing workforce as a key component of the nursing profession's contribution to achieving health equity. The report recommends eliminating practices within nursing education that contribute to racism and discrimination of students and instead focusing on cultivating an inclusive learning environment. Creating an inclusive learning environment requires a multifaceted approach consisting of an inclusive campus climate, fair and equitable teaching and grading practices, diverse delivery of course content, and equitable access to resources for learning (Huang, 2021).
Brief Description of Papers: The papers presented in this symposium reflect a multi-faceted approach in a School of Nursing to improving learning environments for diverse learners. The first three papers describe equitable teaching and grading practices and the use of innovative modalities to engage students in undergraduate and graduate programs. The last two papers discuss examples of systemic approaches to achieving inclusive and equitable learning environments. The first paper describes the implementation of active learning strategies using a flipped and blended classroom approach, which has been linked to improved academic success for diverse students (Theobald et al., 2020). The second paper describes the implementation of inclusive learning strategies to promote a growth mindset. Such strategies have been associated with increased perceptions of belonging and improved confidence and self-efficacy in prelicensure nursing students from diverse backgrounds (Metzger and Taggart, 2020). The third paper describes the implementation of specifications grading framework, a type of standards-based grading, in graduate nursing courses. Standards-based grading has been associated with more equitable grading practices that reduce bias and promote a focus on achieving learning outcomes (Feldman, 2018). The fourth paper describes an initiative to improve the online learning experience for all students through the expansion of Quality Matters course certification. This certification promotes accessibility for all students and aligns learning outcomes to assessments and activities and is associated with improved learning and engagement (Gaston & Lynch, 2019; LaSala et al., 2020; Sadaf et al., 2019). The last paper describes a faculty development initiative to implement equity-centered, trauma-informed educational practices across campuses and programs. A trauma-informed approach recognizes the pervasiveness of trauma and its impact on learning, and acknowledges the effect of inequitable practices in causing trauma for historically and systemically excluded students, educators, and administrators (Brown et al., 2021).
Outcomes Achieved: The papers in this symposium contribute to knowledge development related to creating or improving inclusive learning environments for other colleges, universities, and states to consider.
Conclusion: Individual course level, as well as systematic programmatic strategies, are necessary to evaluate and disseminate to achieve a more inclusive and equitable educational environment for all learners, especially for students who have been historically excluded from nursing. This symposium demonstrates the potential collective impact a multi-faceted approach can take on a school of nursing's progress towards creating an inclusive and equitable learning environment.

Employing Strategies of Equity and Inclusion through a Flipped Learning Method

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Purpose: To share strategies on providing an inclusive and equitable environment through implementation of a flipped learning method for two undergraduate nursing courses.

Background: Currently, there is an important focus on improving equity and inclusion within our institutions of higher learning. While we work toward this cause, nursing educators should employ known pedagogies that may be revised and strengthened over time. The American Association of Colleges of Nursing's (AACN) Vision for Academic Nursing whitepaper recommends the use of flipped learning as a method for addressing the needs of diverse learners. The Flipped Learning Network describes flipped learning as having a flexible, learner-centered culture, an intentionality of content selection maximizing active learning, and an environment conducive for reflective instructor assessment and feedback. Flipped learning allows for variety in pedagogical strategy and is inherently learner-centric, positioning the instructor for heightened awareness, intentionality and responsiveness to classroom dynamics.

Description: The body of literature that supports flipped learning as a method to engage students of all abilities and increase student-instructor interaction inspired the conversion of two traditionally lecture-based undergraduate nursing courses. Course evaluation averages and written feedback were used to assess student buy-in of the method. After four years of practice and revision, the current structure of these courses is divided into three parts. Before class, students complete basic learning through readings, recorded lectures, online activities and quizzes before attending face-to-face class or posting forums. Next, during classes/forums, peers collaborate through active learning in small groups. This requires application of their new learning. In this environment, the instructor assesses individuals and groups, fosters critical thinking, and provides real time feedback. Finally, after class, students make judgments with their advancing knowledge through contemplative assignments, particular study techniques, and concurrent clinical courses. This three-part method ensures repetitive learning of the content at increasingly higher levels.

Findings/Outcomes: Initial student buy-in was poor based on course evaluations with a nadir of 4.67/6, as well as written feedback such as, "I think it would be more beneficial to have the lectures face to face...." During year two, a video describing the flipped method, why it is used, and how it benefits learning was provided for the students. It was updated each academic year for clarity and to address specific student concerns. Evaluations steadily improved over four years with the most recent evaluation average at a peak of 5.40/6 and positive feedback such as, "The course was organized so well with coordination between forums and in–person class." The outcome of this project is a well-established format for flipped learning that students increasingly rated positively.

Conclusion: Providing clarity regarding the rationale for using flipped learning strengthened students' engagement and improved perception of the method. Future projects will include applying new evidence-based strategies, as they emerge, to this already successful and adaptive format. An iterative approach may be needed to effectively measure and evaluate prospective equitable and inclusive strategies in order to ensure they are supportive of student learning.

Using Growth Mindset to Promote Belonging in the First Term of Nursing School

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Purpose: This presentation describes simple strategies to promote growth mindset and belonging among students in the first term of nursing school.

Rationale/Background: A multitude of factors affect student success in nursing school. Literature indicates students report anxiety, not feeling smart enough, and inexperience with higher education. These can negatively impact learning, especially in the first terms of school. These factors are often associated and contribute to barriers to learning among diverse students. Studies indicate students may be reluctant to utilize tutoring since it reinforces imposter syndromes and fears of not being smart enough. At our School of Nursing, students frequently express uncertainty about belonging. Simple interventions based on growth mindset were introduced in a first-term hybrid pathophysiology course to counteract these fears.

Brief Description of Project: To facilitate the adoption of growth mindset, students were asked to post an introduction of themselves in the electronic course forum and include something they accomplished that they were not sure they could do, along with specifying a strength that helped them attain their goal. Students posted their introduction in the first week of the pathophysiology course. They were asked to read at least five colleagues' posts, and reply to at least two posts. Growth mindset and psychological safety were discussed in class, with short videos provided with additional information. To further reinforce growth mindset, students completed a weekly short learning reflection with prompts that included "What topic from this week will you spend more time to understand?", "What strategy helped you grasp a complex concept this week?", and "What was one way you practiced a growth mindset in the first month of nursing school?". Students were given an opportunity to anonymously and voluntarily respond to this prompt: "What benefits, if any, did you feel you gained from doing the introduction forum post?"

Outcomes:

- Students reported reflecting on previous challenges helped remind them of successes and their strengths for success in nursing school. "After voicing my strengths, it helped me to own them and feel a boost of confidence that I embody these traits."
- Students commented it was beneficial to read and reply to other students' posts. "I appreciated most that many others shared the same fears and doubts about getting into and succeeding in this program. It was helpful to know my concerns are not unique to me, that we are all in this together." "Imposter syndrome is real; knowing that most classmates were feeling the same made me feel seen." "Helped alleviate jitters of beginning nursing school."
- Regarding growth mindset, a typical response was: "Growth mindset helped me know I don't have to be perfect, that I can work hard and improve".

Conclusions/Recommendations: The introduction activity was easy to administer and overwhelmingly supported by students as helping them connect with colleagues by learning they share many strengths and fears. This activity framed weekly reflections on growth mindset and helped improve students' confidence and mitigate their anxiety. Since anxiety is associated with grades, recommendations include grading policies that better support growth mindset.

Specifications Grading: An Approach Towards Equitable Assessment

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Purpose: The purpose of this presentation is to review the findings of the implementation of specifications grading into graduate nursing courses in a nursing education program.

Rationale/Background: Traditional grading incorporates practices, such as mathematical precision, accumulation of points, averaging performance over the course, and grading for behaviors, such as lateness, effort, or participation. These practices have come under scrutiny as inequitable (Feldman, 2019) since biases underlying these principles may benefit more privileged students. Awarding or deducting points for behaviors, such as lateness, may elicit faculty bias in grading (Feldman, 2019). Learners, especially those unfamiliar with an academic program or the expectations of a faculty, may struggle at the beginning of a course or program (Huang, 2021). Averaging points and/or percentages over a course term may negatively impact students with learning gaps. A standards-based grading practice is recommended that focuses on students' achievement of the learning outcomes. Specifications grading is a form of standards-based grading that allows multiple opportunities for learners to demonstrate achievement of learning outcomes and select the grade and assignments to demonstrate outcome achievement. Specifications grading has been associated with improved student motivation and academic performance (Katzman et al.,2021; Pope et al., 2019) primarily in undergraduate educational settings. Implementation of this type of grading schema within nursing academia is limited (Bray & Jones, 2022). This presentation reviews implementation of this type of grading in a nursing graduate program.

Brief Description of the Undertaking: A specifications grading system was implemented into two courses: one in the initial course design and the other in which the grading system was revised to address specifications grading principles (Nilson, 2015). Bundles of assignments were created that linked to achievement of the learning outcomes. To earn higher course grades, students needed to demonstrate higher achievement of learning outcomes, through more rigorous or a higher volume of assignments. Pass/fail rubrics were designed for all assessments. Limited options were provided for learners to submit drafts, revise unsatisfactory work, or to submit work late. Information on specifications grading and criteria for each grade was provided at the beginning of the course with options for learners to select the grade they wanted to work towards.

Assessment of Findings/Outcomes Achieved: Learners were able to achieve course outcomes with minimal need for resubmission of work early on in the course. Learners and faculty were satisfied with the experience. Faculty perceived a decrease in time needed for grading assignments. Feedback from some students regarding the grading system indicated that they did not perceive it as significantly different from traditional grading. Others expressed unfamiliarity with grading that was not dependent on percentages towards assignments. Students appreciated the clear directions from rubrics and grading options.

Conclusion: This presentation demonstrates the successful use of specifications grading to more equitably assess learners' achievement of learning outcomes and reduce faculty and student grading burden. Providing information to learners on the process and benefits of specifications grading can facilitate understanding of this grading system.

Equitable & Inclusive Teaching Practices: Implementing Quality Matters Course Design

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Purpose: The purpose of this presentation is to share a systemic initiative to promote diversity, equity and inclusion (DEI) through intentional course design. At our school of nursing, nursing faculty and instructional designers collaborated to develop and disseminate DEI educational strategies. Guidelines for this work include Quality Matters (QM) Higher Education Standards, Universal Design for Learning (UDL) principles and recommendations for equitable and inclusive learning environments. This session specifically describes an initiative to improve online learning for all learners through the application of standards and principles to course design within the context of diverse student nurse learners.

Background: Over the past few years, due to changing student needs as well as pandemic restrictions, our school of nursing has experienced an unprecedented increase in the online delivery of all our programs. Because online learning has and will continue to become a more permanent feature of nursing education, it is essential that we work to make it an equitable and accessible learning environment. Current recommendations for building and supporting equitable and inclusive learning environments include three concepts: 1) Intentional review and revision to increase the diversity of course content; 2) Application of course design principles of accessibility and usability; and 3) Facilitation of learner autonomy. These concepts align with standards of QM and the principles of UDL.

Approach: A team consisting of SON and TLC faculty developed an initiative to improve the online learning experience for all students through expansion of QM course certification, including development of a standardized course templates and targeted faculty development. This systemic change incorporated QM and UDL principles and included inclusive learning recommendations related to diversity of course content, accessibility and learner autonomy. QM is a national organization that sets standards for the design of online and blended courses with a commitment to accessibility and usability for all learners. UDL is a framework that supports success for all students, based on research into how people learn. Together, QM and UDL provided a comprehensive guidance on effective and inclusive online course design. The outcomes of this initiative to increase QM certified courses included: a) number of courses reviewed and QM certified with intention to expand across programs at our SON; b) student evaluation of course effectiveness; c) capacity for QM course certification; and d) number of QM and DEI trainings and faculty participation.

Outcomes Achieved: Outcomes of the initiative are positive. For example: a) 14 QM certified courses across three SON programs with seven courses in process; b) positive student feedback on course organization and usability; c) faculty participation in QM review training (ten QM peer reviewers and three lead reviewers); and d) faculty participation in two QM trainings on course design and two TLC workshops on inclusive teaching practices.

Conclusion: Application of QM standards and UDL principles support equitable and inclusive health education. Further opportunities for continuing this work includes ongoing reflection on course objectives, content, activities and assessment across programs for identification of gaps and opportunities for improving the learning environment for all learners.

Trauma-Informed Pedagogy: A Just, Equitable, and Inclusive Practice

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Aims:

To describe an initiative for implementing Trauma-Informed Pedagogy in a school of nursing by:

1. Collaborating with experts on Trauma-Informed Educational Practice (TIE-P) to implement a series of webinars
2. Examining the barriers and facilitators for implementing TIE-P in the learning environment

Background: To meet the challenges in healthcare, including dismantling racism, it is imperative for teaching and grading practices in nursing education to be fair, and just, and to foster a sense of belonging for students and faculty. Nurse educators are experiencing inequities impacting well-being and contributing to a lack of job satisfaction and burnout. These inequities include struggling with heavier workloads, role strain, insufficient time, and for faculty of color, dealing with microaggressions and discrimination. Inequitable practices can induce trauma, and according to educational neuroscientists, chronic stress and trauma can have a great impact on learning and education. The adoption of TIE-P addresses inequitable practices, however, there is a paucity of evidence on the best model to implement in the learning environment. The Substance Abuse and Mental Health Association services (SAMHSA) have identified 10 domains for Trauma-informed care which can be used as a framework for TIE-P. This presentation describes an initiative to promote the implementation of TIE-P grounded in equitable, inclusive, and culturally responsive pedagogical approaches.

Brief Description: A team of faculty and education specialists within the organization collaborated on this project. We reviewed the literature, completed training in Mindset learning, and met with internal and external stakeholders with expertise in culturally responsive learning. We implemented a series of Lunch and Learns (LLs) with experts presenting on TIE-P topics and surveyed faculty and staff on facilitators and barriers to implementing equitable practices

Outcomes and Findings: Four LLs were held over 6 weeks, averaging 33 participants per session. Utilizing TIE-P experts facilitated discussions, however, the differences in the presentations contributed to challenges related to the scaffolding of the content with each session. Surveys post-LLs indicate that faculty and staff are motivated to implement TIE-P. Overall, participants' knowledge of trauma's impact on the brain and inequitable practices in the learning environment improved throughout the LLs. Nine participants completed a final survey evaluating all 4 LLs. All 100% (9/9) indicated they felt they were Trauma aware and sensitive, 66% (6/9) stated they felt trauma-informed, and 3 out of the 9 have begun to use TIE-P in the learning environment. Faculty requested to learn more about equitable grading practices, using social-emotional learning, and self-care practices. They indicated time, policies, and structures were barriers to implementing TIE-P.

Conclusion: Nurse educators are ready to adopt inclusive and equitable strategies in the learning environment. Developing a strategy and collaboration with internal and external stakeholders is critical to ensure faculty barriers are addressed, and faculty and staff have the resources to implement TIE-P. This work focused on the first step of the ten domains recommended by SAMHSA. More work and empirical evidence are needed to ensure we are meeting the needs of students, staff, and faculty.

Funding: The study was funded by Oregon Health & Science University School of Nursing Innovations Grant

“NOTHING ABOUT US WITHOUT US”: CONTEMPORARY USES OF TECHNOLOGY & EMERGING METHODS TO ADVANCE LATINO/X HEALTH EQUITY

“Nothing about Us without Us”: Emerging Methods & Technology in Latino/x Health

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Background: Latinos/x in the United States (US) represent a growing, and heterogenous group. Currently a fifth of the population (19%), US Latinos/x are anticipated to expand by 86% in the next 30 years to over 119 million. While variety exists across countries of origin, cultural traditions, and geographic locations, certain access disparities span this diverse group. Notably, a systematic lack of access to healthy lifestyle options, and reduced access to preventive care, have resulted in increased risk for acute and chronic illness, cancer, trauma, and substance use/abuse. Emerging technologies and new methodological approaches offer a source of hope and potential solutions but should be considered using a health equity lens that recognizes a legacy of medical disenfranchisement in this community.

Purpose: This is the 2023 symposium submission of the WIN *Latino/x Research with Individuals, Families and Communities* Special Interest Group. This year we explore the question “How are emerging methods and new technologies advancing health equity among US Latinos/x?” Our presenters highlight these novel approaches while exploring pitfalls, and ethical considerations within a structural and historical perspective.

Methods: For your consideration, we offer four studies/projects describing new technologies or emerging methods employed by researchers who work with US Latinos/x. These include: 1) an exploration of epigenetic testing for advanced recognition of cardiovascular risk among Mexican American women; 2) a look at emergent Covid-19 data to understand the impact of early life stressors among Latina nursing students; 3) the use of a technology-enhanced hub and spoke system to address medication-assisted treatment for opioid use in a rural, predominantly Latino/x community; and, 4) a virtual, telecommunications platform-assisted Spanish Language Institute designed to prepare healthcare students to address Latino/x health disparities.

Results: Across these explorations potential benefits and drawbacks related to these emergent technologies and methods are identified. A review of epigenetic testing for cardiovascular risk modeling reveals scant evidence to support this technology in low-income, Latino/x groups despite case study results indicating potential for reduced morbidity/mortality when used for early diagnosis. Pandemic data used to explore early life trauma in Latino/x nursing students highlights the need for healthcare diversity pipelines that could address emotional wellbeing, yet also reveals that it may be cost-prohibitive given the percent of students requiring the services. The use of a technology-enhanced hub and spoke system both provides evidence for coordinated outreach at a large scale, but also reveals that such programs may require significant resources or access to academic centers. Finally, the creation of a virtual Spanish language institute allows for broader inclusion of those wishing to better communicate with Spanish-speaking patients, but also recognizes additional aspects of Latino/x culture (beyond language congruity) that support authentic connection between providers and patients.

Conclusion: Emerging technologies and methods to address US Latino/x health disparities are promising, but nascent, and require a commitment to contextualizing findings within a structural and historical perspective. New strategies to address US Latino/x health inequity are needed, but additional research can shed light on best practices in terms of implementation and community buy-in.

“NOTHING ABOUT US WITHOUT US”: CONTEMPORARY USES OF TECHNOLOGY & EMERGING METHODS TO ADVANCE LATINO/X HEALTH EQUITY

Improve Latino Health Literacy with Remote Spanish Education for Healthcare Students

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Purpose/Aims: This feasibility study explored the effects of a 6 –week Conversational Spanish course delivered remotely using videoconferencing software among an interdisciplinary cohort of healthcare students.

Rationale/Background: National assessment of adult health literacy suggests that Hispanic adults in the U.S. have the lowest average health literacy scores of all racial and ethnic groups. Low literacy rate is associated with higher ER utilization, increased hospitalization, and higher mortality and costs the US economy as much as $236 billion annually. Health care providers (HCPs) can improve health literacy by helping client’s find, understand and use information to inform health-related decisions and actions by effectively communicating in the client’s preferred language at each encounter. Nurses comprise the largest segment of the U.S. healthcare workforce and therefore must be included.

In California, English and Spanish are the dominant languages spoken. California is the nation’s most populous state with the largest proportion being Latino-American (39%) and over 27% (10 million) being immigrant/foreign born. Increasing Spanish fluency among HCP students using accessible, remote technology is a cost-effective strategy to deliver bilingual instruction for a multi-campus university in California.

Approach: The Health Literacy Skills (HLS) conceptual framework was used for this study.

Methods: This study evaluated the knowledge, attitudes, and beliefs about the effects from this 6-week Conversational Spanish course with medical terminology offered to 20 volunteers who were enrolled in a HCP program at one university in California. Remote Spanish Instruction for students in healthcare (Remote SpanISH) was provided by bilingual (Spanish & English) speaking student interpreters with native to professional working proficiency and faculty facilitation in a semi-structured format using Zoom videoconferencing over 6 weeks during the summer of 2022. An 18-item pre- and post- survey was administered to all remote SpanISH participants with 20 responses collected with an optional end of program feedback session to inform development.

How Improvement/Change Was Measured/Assessed, if Applicable: Not applicable for this pilot/feasibility study. However, additional observational data was collected about project administration, challenges, and areas for improvement to support subsequent iterations and project expansion.

Results: Participants of the remote SpanISH program (n=20) were comprised of four HCP disciplines on three campuses at one university in California, the majority being nursing students. Of the remote SpanISH participants surveyed, the majority reported being satisfied with the SMU bilingual student interpreters (100%), feeling more confident speaking to Spanish speaking clients using this remote Spanish instruction (90%), perceived this Spanish instruction enhanced their ability to speak conversational Spanish (75%), better prepared them as a HCP (80%), and believed this SpanISH should be increased at this university (95%).

Impact: Health literacy is a central focus and a foundational principle of Healthy People 2030. This study provides needed outcome data on the effects of a 6-week remote SpanISH and to support future technology-facilitated SpanISH training for HCPs. Future research may include nursing specific curriculum, studying the perceptions of Spanish speaking individuals who receive SpanISH, and international SpanISH partnerships.

Funding: Samuel Merritt University’s Ethnic Health Institute

“NOTHING ABOUT US WITHOUT US”: CONTEMPORARY USES OF TECHNOLOGY & EMERGING METHODS TO ADVANCE LATINO/X HEALTH EQUITY

Integrating the Medication for Opioid Use Disorders across Hispanic Rural Colorado

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Purposes: Our aim was to evaluate a Hub & Spoke (H&S) model of Medication for Opioid Use Disorder (MOUD) treatment enhanced through health technologies to integrate clinical services, case management and care coordination for a continuum of patient care in rural Hispanic Colorado.
Rationale/Background: Opioid use disorders (OUD) remain a national crisis. Opioid overdose, particularly heroin and fentanyl, increased drastically during the COVID-19 pandemic. Colorado ranks at top nationally in non-medical use of opioids, and rural counties show the highest rates of overdose deaths. In July 2021, the Colorado Senate approved an expanded MOUD program to increase access to care for OUD in rural areas, with a focus on care linkage and patient retention. Rural Colorado counties were identified as medically underserved or Health Professional Shortage Areas and prioritized due to high overdose deaths. Many residents in these counties are Hispanics and of low socioeconomic background. The H&S model addresses access gaps in rural communities through network of treatment and referral with an anchor organization and satellite sites.
Methods: Six healthcare organizations were funded to offer MOUD in a H&S system connecting clinical experts, resources, and primary health care agencies across Colorado. A centralized multi-system electronic platform was developed, beta-tested, and iteratively improved based on user-centered design principles to standardize data collection, enhance health information management across stakeholders, support treatment workflows and improve analytic capacity. Harmonized de-identified patient- and organizational-level data were extracted and analyzed for statistical analysis using R.
Findings: The H&S model encompasses 34 primary sites in 17 rural/frontier counties that served 1,035 individuals with OUD since July 2021. Patients were mostly White (86%), male (55%), Hispanics (521%), mean age of 39 years old, have Medicaid (87%) or uninsured (7%). Many reported unstable work (60%) and housing (38%), low to fair health (23%), and multi-substance use (80%). Clinical improvements focused on patient-centric care and the development of treatment and referral networks through community partnership and care coordination. While the treatment varies across sites, medication visits were the most frequent (range 2.4 to 16.2 visits/patient/month), followed by behavioral health (average 2.6 visits/patient/month). While telehealth was implemented in all clinics during COVID-19, in-person visits prevail in the post-pandemic despite 60% of sites offering telehealth. Case management/care coordination and peer-support specialists were used increasingly in some of our clinics for resource connection, address social determinants of health and to overcome access barriers (up to 3/patient/month). Preliminary outcomes demonstrate improvements in substance use, physical, and mental health among patients retained in treatment (all *p*s < .05). A centralized user-centered designed IT platform allowed us to capture services beyond medication, including contingency management, care coordination, referral, and engagement in treatment, enhancing patient-centered care, health equity and outcomes for individuals with OUD.
Conclusions: This project illustrates the complexity of practice transformation within rural community health care settings. Lessons learned from this integration of health information technology into a H&S model can enhance access to care for underserved rural populations, and bring sustainable solutions for the opioid crisis in Colorado and beyond.

“NOTHING ABOUT US WITHOUT US”: CONTEMPORARY USES OF TECHNOLOGY & EMERGING METHODS TO ADVANCE LATINO/X HEALTH EQUITY

Childhood Stress and Depression Disparity in Hispanic Women Nursing Students

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Purpose: To assess the relation between early life stress and depressive symptoms in women nursing students with the hypothesis that this relationship is stronger among Hispanic versus non-Hispanic students.

Background: In the U.S., young Hispanic women are at greater risk of developing depression than non-Hispanic women. Psychosocial stressors during childhood may partly explain this disparity as research shows that early life stress is associated with increased risk of depression in adulthood, and that this association might be potentially mediated by an increased susceptibility to stressors. Understanding this association and its pathways is important for nurses as they experience increased exposure to work-related stressors and high prevalence of depression compared to other professions. The urgency increases for Hispanic women nurses who are more likely to be exposed to life stressors than their non-Hispanic counterparts. Despite the urgent need to curb disparity, the role of early life stress in the disparity of depression among Hispanic and non-Hispanic women remains poorly understood.

Methods: We used cross-sectional data from the Nurse Engagement and Wellness Study (NEWS), a prospective cohort study of undergraduate nursing students at a university in Texas (N=377). We focused our analyses on women (n=293). We used an innovative measure of stress (i.e., Stress and Adversity Inventory for Adults) to assess the exposure and severity of stressors across the life span, and the Patient Health Questionnaire (PHQ-9) to measure the severity of depressive symptoms. Using mixed effects regression models, we examined the association between early life (up to 18 years of age) stress exposure and severity and depressive symptoms, and assessed the interaction between early life stress and ethnicity while accounting for age, socioeconomic status, stress in adulthood, social support and parental attachment.

Results: The sample was predominately Hispanic (87%). The association between early life exposure to stressors and depressive symptoms differed significantly when comparing Hispanic vs non-Hispanic women (p=0.031). Specifically, a positive association between early life stress and depressive symptoms was only observed among Hispanic students. These results were essentially unaffected by the adjustment for age, socioeconomic status, stress in adulthood, social support or attachment. Also, there was no meaningful difference between models with stress exposure and stress severity.

Implications: These findings suggest that early life stressors may play an important role in the disparity of depression between young Hispanic and non-Hispanic women. Understanding that early life stress is a risk factor for depression and a determinant of disparity for Hispanic women is also informative in nursing, as our results highlight the need for trauma-informed environments within schools of nursing and health systems, which currently aim to become more diverse and promote well-being among the communities that form them. Trauma-informed systems are necessary because they recognize and respond to susceptibilities caused by the biological embedding of trauma including that experienced as early life stress. We also demonstrated the utility of a novel instrument for the assessment of stress exposure and severity across the life span that can support a more comprehensive examination of stress among nurses and nursing students.

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“NOTHING ABOUT US WITHOUT US”: CONTEMPORARY USES OF TECHNOLOGY & EMERGING METHODS TO ADVANCE LATINO/X HEALTH EQUITY

An Exploration of Potential Uses of Epigenetics in Metabolic Syndrome Among Latinos

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Background: Metabolic Syndrome is a chronic inflammatory state increasing the risk for cardiovascular disease, diabetes, and stroke. Nearly a third of adults in the United States (US) meet the criteria for metabolic syndrome, with a higher prevalence among the Latino/x population (36%). Epigenetic testing has emerged as a new technology predicting risk for metabolic syndrome and enabling lifestyle changes that may prevent the development of cardiovascular co-morbidities. However, known access disparities and negative social determinants of health may contribute to epigenetic risk while simultaneously inhibiting the uptake of lifestyle changes in historically low-income groups or those who experience access disparities, such as US Latinos/x. This calls into question the usefulness and equity of this novel approach and highlights ethical considerations among low-income US Latinos/x.

Purpose: The purposes of this case study project were to 1.) To describe the use of epigenetics as a clinical marker instrument to predict/measure health outcomes of Latina women at risk for metabolic syndrome. 2.) To model an epigenetic-preventive care model for two US women with metabolic syndrome risk, including culturally-informed experiences accessing this novel diagnostic. 3.) To consider ethical implications of epigenetic testing for metabolic syndrome among Latinos/x in consideration of structural and built environments that may inhibit lifestyle changes.

Methods: Our conceptual framework for this project was the Case Method (Bruner, 1991) which encourages “contextual learning” and “relative values”. We performed a scoping review using EBSCO host, PubMed, and CINHaL (*key terms*: “Metabolic syndrome, Latino/a, Epigenetics, Epigenetic diet, Epigenetic drugs, MicroRNA, Microbiome, Nutrigenomics, Ethics, Barriers, Health outcomes, and Management”) and a gray literature search of metabolic syndrome management, and possible implications of epigenetic testing for prevention and control of metabolic syndrome among US Latinos/x.

Findings: Preliminary studies on the epigenetics of metabolic syndrome indicate several potential biomarkers for diagnostics and aid in preventing complications (cardiac disease, stroke, diabetes). These markers introduce the possibility of targeted therapies such as; “epidrugs,” epigenetic diets, miRNA-therapies, and epigenetic editing. Unfortunately, research on these markers in the Latino/x population is lacking despite the condition’s prevalence in this population. Our review of current epigenetic marker instruments revealed the potential to monitor lifestyle interventions and the disorder’s progression. However, barriers in accessing this technology include provider bias, inadequate health coverage, and lack of Latino/x representation in current epigenetic research. Our case study highlights access disparities between two Latina women in the US, including possible co-morbidities resulting from (or prevented by) structural support for healthy lifestyle choices.

Implications for Research: Despite Latinos/x bearing an increased metabolic syndrome disease burden, limited epigenetic studies have been done in this population. Current literature on epigenetic measurements and interventions merits further exploration of its uses among Latinx/o patients. In addition, future works should consider the ethical implication of using epigenetic measurements in population health, specifically intersections with negative social determinants of health, to ensure this novel technology is potentially beneficial across diverse populations.

SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN AMONG CANCER SURVIVORS AND CAREGIVERS ACROSS THE LIFESPAN

Social Determinants of Health and Symptom Burden Among Cancer Survivors and Caregivers

***Terry Badger**, PhD, RN, PMHCNS-BC, FAPOS, FAAN, College of Nursing, University of Arizona, Tucson, AZ*

The purpose of this symposium is to discuss social determinants of health (e.g., age, ethnicity, neighborhood, social connectiveness and isolation) among cancer survivors across the lifespan and their caregivers. Our first paper will discuss neighborhood disadvantage and social isolation as predictors of psychological and physical symptom burden in cancer survivors. The second paper will focus on social determinants of health and symptom burden among caregivers who are Hispanic, non-Hispanic white and non-Hispanic of other races. The third paper will focus on the relationship between community connectedness (SDOH), cancer incidence and technology access and/or health behaviors. The fourth paper will focus on the prevalence and correlates of social isolation and connectedness among young adult cancer survivors. The final paper will describe our innovative strategies using technology and community engagement to recruit diverse (i.e., Hispanic, rural) populations into cancer studies.

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SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN AMONG CANCER SURVIVORS AND CAREGIVERS ACROSS THE LIFESPAN

Neighborhood Disadvantage & Social Isolation Predict Symptom Burden in Cancer

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Purposes/Aims: The specific aim of this project is to test of model of neighborhood disadvantage and social isolation as potential predictors of physical (e.g., fatigue) and psychological (e.g., depression) symptoms in a sample of cancer survivors who are either in, or have recently completed, treatment.

Rationale/Conceptual Basis/Background: During and after treatment cancer survivors commonly experience a range of physical and psychological symptoms such as fatigue, pain, depression, and anxiety that diminish quality of life. In addition to traditionally studied social determinants of health, social contextual factors that may pose a substantial risk for symptom burden. Neighborhood disadvantage refers to community social characteristics that reflect access to resources and social isolation refers to feeling disconnected from other people without access to needed social support. Cancer survivors who live in disadvantaged neighborhoods and feel socially isolated may be doubly at risk for debilitating symptom burden.

Methods: Participants were 843 cancer survivors who were currently in treatment ($N = 400$) or who had recently completed treatment ($N = 446$). The sample was 80% women with a mean age of 58.72 ($SD = 12.81$) years. Forty-five percent of the participants identified as Hispanic, 40% had a high school education or less, and 55% reported an annual household income less than $40,000. The most common types of cancers represented in the sample were breast (51%), lung (8%), colorectal (7%), and ovarian (6%). Participants completed measures of physical and psychological symptoms, in addition to social isolation and social support. These data were merged with the 2021 American Community Survey (US Census Bureau) indicators of neighborhood disadvantage by zip code. Data were analyzed in structural equation modeling, testing associations between two predictive latent variables (neighborhood disadvantage and social isolation) and two latent outcome variables (physical and psychological symptoms). Household income, education, and Hispanic ethnicity were entered into the model as covariates.

Assessment of Findings/Outcomes Achieved: The hypothesized structural model provided an adequate fit to the sample data, CFI = .95, NFI = .94, RMSEA = .07 (90% CI = .06 - .08). Survivors who resided in disadvantaged neighborhoods, as indicated by fraction of residents living in poverty, receiving income assistance, without health insurance, and with less than a high school education, reported higher psychological symptoms such as depression and anxiety ($\beta = .16$, $p < .001$) and higher physical symptoms such as fatigue and insomnia ($\beta = .19$, $p < .001$). Similarly, social isolation, as indicated by loneliness, lack of emotional and informational support, was significantly associated with psychological symptoms ($\beta = .57$, $p < .001$) and physical symptoms ($\beta = .31$, $p < .001$). Neighborhood disadvantage and social isolation were not significantly associated ($r = -.01$, $p = .67$).

Conclusions/Implications: Residing in a disadvantaged neighborhood and feeling socially isolated represent independent risk factors for psychological morbidity and physical symptom burden among cancer survivors. Nurses can easily assess survivors' neighborhood characteristics by zip code and can also inquire about social isolation and support to identify and monitor those at risk for elevated symptom burden.

Funding: 1R01CA225615-01 NCI 1R01CA224282-01A1 NCI

SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN AMONG CANCER SURVIVORS AND CAREGIVERS ACROSS THE LIFESPAN

Social Determinants of Health and Symptom Burden Among Informal Cancer Caregivers

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Purpose/Aims: Informal caregivers of cancer survivors experience multiple physical and psychological symptoms that influence their well-being and care they provide to survivors. The purpose of this paper is to examine the relationships of social determinants of health with symptom burden in caregivers of cancer survivors.

Methods: Baseline data were analyzed from 396 caregivers of survivors who participated in a randomized trial of symptom management interventions. Symptom burden was measured by the Center for Epidemiological Studies-Depression (CES-D) scale, Patient Reported Outcomes Measurement Information System (PROMIS) anxiety 8-item short form, and the General Symptom Distress Scale (number of and severity of symptoms). Comorbidities were self-reported using the Bayliss tool. Social determinants of health included age, sex, race/ethnicity (Hispanic, Non-Hispanic White [NHW] and Non-Hispanic of other races), survivor-caregiver relationship, income meeting needs, and social isolation measured using PROMIS 4-item short form. General linear models were used to relate symptom measures (one at a time) to social determinants of health and comorbidity.

Results: Mean caregiver age was 54 years (standard deviation [SD] 16, range 19-86), and mean number of co-morbidities was 3.7 (SD 2.8). NHW caregivers were older and had higher income compared to Hispanic (N=178) and non-Hispanic caregivers of other races (N=43). Spouses or partner caregivers comprised 43% of the sample. Younger age, greater number of co-morbid conditions and social isolation were significantly associated with worse symptom outcomes: greater number of symptoms, higher symptom severity index, depression, and anxiety. Males and non-Hispanic caregivers of other races had lower anxiety and depressive symptoms scores compared to females or NHW caregivers.

Conclusions/Implications: Socially isolated caregivers may lack access to socially supportive resources, and those with co-morbidities have preexisting symptom burdens of their own. Focusing on younger, male, non-Hispanic non-White caregivers, and assessing social isolation may help nurses in supporting cancer caregivers and planning quality care for cancer survivor-caregiver dyads.

Funding: PI Terry Badger. Improving Informal Caregivers' and Cancer Survivors' Psychological Distress, Symptom Management and Health Care Use (R01 CA224282), NCI. MPIs: Terry Badger/Alla Sikorskii. Post-chemotherapy Symptom Management: Testing Intervention Sequences in a SMART Design (R01 CA225615-01), NCI,

A Systematic Review of Isolation/Connectedness Among Young Adult Cancer Survivors

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Purpose/Aims: Social isolation and connectedness are associated with myriad cancer outcomes. Past work has explored social isolation and connectedness among pediatric and older adult cancer populations; however, the literature related to these constructs has not been systematically examined in young adult cancer survivors. This systematic review evaluated the prevalence and correlates of social isolation and connectedness among young adult cancer survivors.

Methods: Articles published before June 2021 were identified following PRISMA guidelines from MEDLINE/PubMed, Embase, CINAHL, and PsycINFO. Included articles described English-language empirical studies assessing social isolation and/or connectedness qualitatively or with a validated quantitative measure. Participants were young adults with cancer aged 18-39 at the time of diagnosis and 18-44 at the time of participation. All study designs were included, although grey literature was excluded. Reviewers screened titles, abstracts, and full texts for eligibility in duplicate using Rayyan, and extracted data in duplicate using a standardized Excel form. Conflicts were resolved through consensus review and discussion. Methodological quality of qualitative and quantitative articles was assessed using QualSyst, with scores ≥80%, 71-79%, 50-70%, and <50% interpreted as reflecting strong, good, adequate, and limited quality, respectively.

Results: The search yielded 5,094 unique records, of which 4,140 were excluded following title/abstract screening and 910 were excluded following full text review. Records were most frequently excluded after full text review because participants were outside of the young adult age range (n=675). Ultimately, 44 articles were included, 34% (n=15) of which reported quantitative studies, 61% (n=27) qualitative, and 5% (n=2) mixed methods. Most articles (86%, n=38) were published in 2010 or later. Using QualSyst, 80% (n=35) of articles were strong quality, 14% (n=6) were good quality, and 7% (n=3) were adequate quality. No articles were limited quality. In quantitative studies, prevalence of social isolation among young adults was similar to or higher than in older adults with cancer and non-cancer populations. In qualitative studies, themes related to social isolation emerged in multiple studies, many of which targeted unrelated concepts (e.g., nutrition). Across study designs, greater social isolation was associated with being in active treatment, physical late effects of disease, presence of genetic mutations, and having young children. Greater social connectedness was associated with greater physical activity and being White, married/partnered, female, and employed/in school. The relationship of social isolation/connectedness to age within the young adult range was inconsistent across studies.

Conclusions: Social isolation among young adults is similar to or higher than in older survivors and non-cancer populations, and both social isolation and social connectedness are related to numerous demographic, clinical, and behavioral characteristics. Despite increasing recognition of their importance among young adult cancer survivors, few studies have used validated measures or assessed social isolation or connectedness directly and methods are heterogeneous across studies. Future studies are needed that directly, reliably, and validly evaluate social isolation and social connectedness to move beyond hypothesis-generating preliminary work and to better inform the development of translatable behavioral interventions.

SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN AMONG CANCER SURVIVORS AND CAREGIVERS ACROSS THE LIFESPAN

Community Connectedness Classification and Cancer Incidence in Southern Arizona

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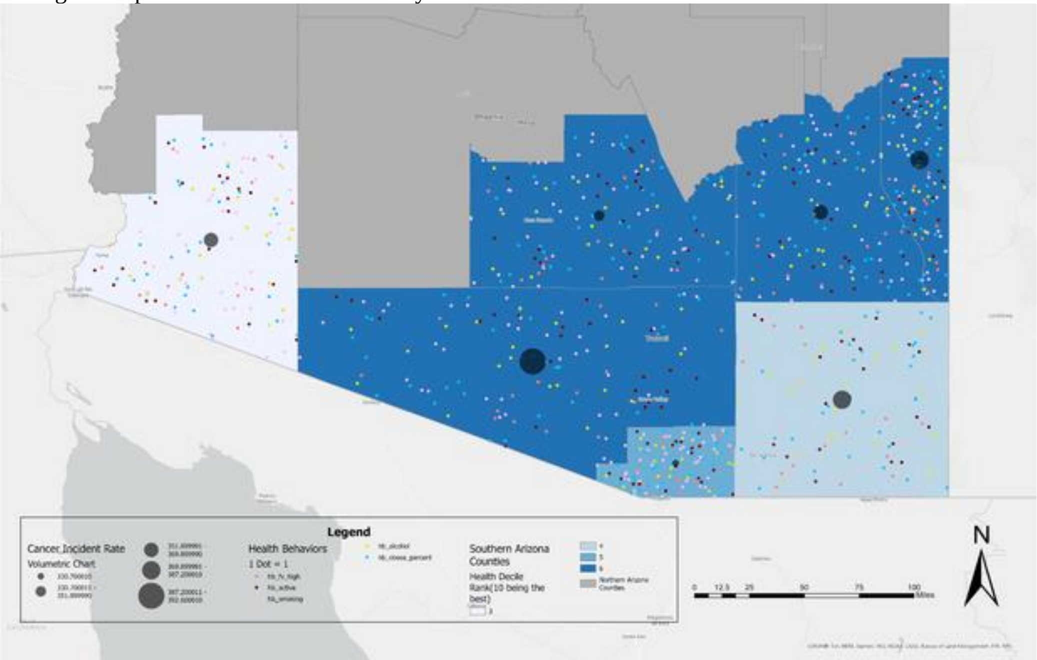
Background: Social determinants of health (SDOH) impact the places where individuals live, learn, work, play, and age that affect health outcomes. Cancer preventive health behaviors, such as high fruit and vegetable intake, being physically active, and maintaining a healthy body mass index (BMI) are associated with lower cancer risk. Previous studies have shown that cancer disparities exist related to age, sex, socioeconomic status, race/ethnicity, and geography. However, the influence of contextual factors of community on cancer incidence is less defined.

Objective: Validate community connectedness classification (C3) to represent positive SDOH factors and determine the relationship between C3 and cancer incidence in Southern Arizona (SAZ).

Methods: Publicly available data from the 2016-2020 American Community Survey (ACS) and 2018 Behavioral Risk Factor Surveillance System (BRFSS) were normalized and merged by county code. To represent positive SDOH factors, C3 was developed using principal components analysis of ACS data by zip code level of four southwestern US states: Arizona, Colorado, Utah, and New Mexico. C3 was evaluated for reliability and validity. Two analytical approaches evaluated the relationship between C3 and cancer incidence in SAZ counties: ArcGIS Pro was used for exploratory geographic information systems (GIS) analysis using geographically weighted regressions with density modeling to visualize relationships; STATA was used for spatial autoregressive models using maximum likelihood estimation to quantify the relationship between C3 and cancer incidence in SAZ counties adjusting for demographics (e.g., sex, age, ethnicity) in model 1 and for health behaviors (e.g., fruit and vegetable intake, physical activity, BMI) in model 2. All models were adjusted for average urban/rural designation.

Results: C3, presenting positive SDOH attributes of communities, demonstrated good reliability and validity. Factors that drive higher values included greater population percent that: 1) have higher household income, 2) are above the federal poverty line, 3) are considered food secure, 4) have internet access, 5) attained higher education, and 6) have a primary care provider. Factor values were classified into deciles where a C3 value of 10 indicates communities with greater prosperity (high) while a 1 indicates communities with greater privation (low). C3 values in SAZ counties ranged from 3-6. GIS models revealed patterns of health behaviors by county (Figure 1), where counties with higher C3 had a greater percent of the population with high intake of fruit and vegetables, who were physically active, and had a healthy BMI. In model 1, C3 was significantly inversely associated with cancer incidence in SAZ (b=-18.6, 95%CI: -31.4, -5.8; p=0.004). In model 2, C3 was significantly inversely associated with cancer incidence in SAZ (b=-31.8, 95%CI: -41.5, -22.1; p<0.0001).

Conclusions: Community connectedness is associated with lower cancer incidence at a population level when accounting for demographics and health behaviors. GIS analysis identified counties that have positive attributes that may buffer cancer disparities. GIS methods applied in this analysis are a valuable tool for researchers in other US regions to visualize data to identify areas of highest need for intervention and infrastructure. These findings can inform policy, healthcare delivery, and intervention design to improve cancer outcomes locally.



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SOCIAL DETERMINANTS OF HEALTH AND SYMPTOM BURDEN AMONG CANCER SURVIVORS AND CAREGIVERS ACROSS THE LIFESPAN

Recruiting Diverse Cancer Survivors Using Technology and Community Engagement

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Background: The Success, Health, Innovations and Equity Arizona Cancer Health Equity Research Center (CHERC) was funded by the American Cancer Society (PI: Badger) in 2022. The Center's goals are to develop and test interventions addressing multiple social determinants of health and to improve cancer equity in Hispanic rural cancer survivors and their caregivers.
Purpose: To expand upon the science of research participant recruitment, we describe our ongoing, systematic efforts to recruit participants on behalf of the UArizona CHERC research team.
Methods: Matsuda's 2016 research recruitment guidelines (*evaluate, engage, reflect, and carefully match or "EERC"*) were adapted as an organizing framework.
Results: CHERC principal investigators composed their research teams based on expertise (e.g., content, culture, communities, communication/language), training (early and late-stage investigators, community partner, clinicians and students), and demonstrated interest to health equity research. A team culture grounded in respect, trust, and power-sharing was cultivated through open communication, active solicitation of participation and feedback from team and community members and ensuring team meeting and leader accessibility. Key informants and cultural insiders (e.g., Hispanic cancer survivors and caregivers, community health workers/*promotoras*, coordinators from federally qualified health centers and the Mexican Consulate and others known to our Hispanic communities) were integrated into research teams and informed the research process, including marketing materials, recruitment strategies, intervention delivery, and data collection. CHERC recruitment and intervention materials have been refined iteratively over years through focus groups and exit interviews/surveys with previous study participants representative of CHERC's target populations. Cancer survivors and caregivers informed on study design and compensation for time spent in research activities is provided, furthering the relevance to enhance participation. Recruitment efforts leverage the trust-based partnerships developed with clinical and community partners to reach a wide range of community spaces and members. Recruiters were identified based on shared language, culture, ethnicity, and experience working with CHERC's recruitment populations. We expand upon Matsuda's framework with an additional component, *reporting* of recruitment reach and effectiveness. To this end, CHERC collects and tracks detailed information through a shared REDCap project accessible to all teams. The effectiveness of recruitment strategies, recruitment progress, and identification of barriers/facilitators to meeting recruitment goals are reviewed monthly in team meetings.
Conclusion: Recruitment efforts for CHERC are currently ongoing. Adaptation of the Matsuda's framework for recruitment is demonstrating short term effectiveness for our interdisciplinary team and should provide future nursing researchers with strategies for successful recruitment for underserved populations.

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SUPPORTING DIVERSE GROUPS OF FAMILY CAREGIVERS:
A FOCUS ON NEW PROGRAMS AND POLICIES

Supporting Diverse Groups of Family Caregivers: A Focus on New Programs and Policies

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In the United States, over 56 million people (20% of the population) are family caregivers providing unpaid care to individuals with chronic conditions to whom they are related by kinship, marital status, or strong social ties. As the population ages, with a tripling of the adult population over age 65 years expected by 2060, the ratio of individuals available to provide care is shrinking. At the same time, hospital stays are becoming shorter with patients discharged sicker and quicker. As a result, family caregivers are being asked to provide more complex care in the home. In large national surveys, most report they feel unprepared for this role, find the tasks difficult to perform, and feel they are inadequately supported by the health care system. In addition to performing medical/nursing tasks in the home, family caregivers make other significant contributions to the health care of individuals of chronic conditions: meeting basic needs (e.g., meals, shelter, transportation, essential daily personal care); providing social and emotional support; coordinating healthcare and appointments; participating in healthcare decision making; managing medication; procuring and overseeing the use of medical equipment; and acting as advocates and surrogates for legal and financial matters.

Although many aspects of family caregiving can be rewarding, the role also has a substantial impact on caregiver physical, mental, social, spiritual, and financial health. Importantly, the health effects of caregiving may be amplified due in the context of providing more caregiving hours, performing complex medical/nursing tasks, and, for many, managing decision-making associated with life-limiting illness. Caregivers commonly report unmet needs related to information, support for performing complex care, and community resources, with those in racial/ethnic minority groups and with low socioeconomic status at highest risk.

This symposium highlights recent research in family caregiving with a focus on specific populations, programs, policies, supports and recommendations. The first presentation draws on a rich dataset of caregiver assessment from the California Caregiver Resource Center (CRC) network to examine patterns of service use and outcomes among caregivers seeking assistance with a focus on predictors of risk. The second paper uses mixed methods to examine implementation outcomes two years after initial statewide implementation of a web-based interactive resource information technology/platform supporting standardized caregiver assessment and provision of tailored resources (CareNav^{TM}) in the eleven California CRCs. The third paper takes advantage of the large trove of data collected in CareNav^{TM} to describe caregiving activities and outcomes experienced by caregivers infrequently studied at the population level, specifically those caring for people with Parkinson's Disease and Lewy Body Dementia. The final paper uses grounded theory methodology to develop a substantive theory (GRACE Model) for grandparent-caregiving among Ugandan grandparent–caregivers who care for grandchildren affected by the HIV/AIDS epidemic.

This symposium session will be of interest to nurses and health professionals interested in research and clinical practice focused on assessment and support of family caregivers who provide care for individuals with chronic conditions.

SUPPORTING DIVERSE GROUPS OF FAMILY CAREGIVERS: A FOCUS ON NEW PROGRAMS AND POLICIES

Complex Care by Family Caregivers Supported by California Caregiver Resource Centers

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Aim: To identify predictors of providing complex care among family caregivers seeking support from the California Caregiver Resource Centers (CRCs).

Background: Complex care is a multi-dimensional construct encompassing factors including time and intensity of care, medical/nursing tasks performed and their difficulty, management of problem behaviors and monitoring unstable health conditions. Little is known about how to identify caregivers engaged in complex care and in most immediate need of intervention. Yet this information is needed to tailor effective interventions by risk and strengthen evidence for the effectiveness of support interventions.

Methods: To address this gap, we used data from a web-based platform, CareNav^{TM} to describe measures of care complexity in a large sample of California caregivers in the CRC network (n=5,287). Specifically, we examined counts of activities of daily living (ADLs) and instrumental ADLs (iADLs) supported, medical/nursing (M/N) tasks performed, and memory and behavior problems managed; and binary (yes/no) measures of task complexity (finding tasks difficult, feeling unprepared or needing more information) and caring for someone with high health care use (3 or more ED visits or hospitalizations in the prior six months). We modeled counts using negative binomial regression and binary variables using logistic regression, controlling for potential socio-demographic and health predictors.

Results: Caregivers supported a mean of 12.4 (SD=3.0; range: 0-15) ADLs/iADLs, 3.0 (SD=2.5; range: 0-10 medical/nursing tasks, and 4.7 (SD=3.8; range: 0-15) memory and behavior problems. Thirty-nine percent reported task complexity and 11% cared for someone with high health care use. Characteristics associated with supporting more ADLs/iADLs included age over 85 years (7% more compared to under 45 years), racial/ethnic group membership other than white non-Hispanic (2-6% more), while college education was associated with 4% fewer ADLs/iADLs compared to less than high school. Variables associated with more medical/nursing tasks included care recipient with income below the federal poverty level (FPL; 10% more than at or above); Hispanic/Latino race/ethnicity (8% more than non-Hispanic white), female (8% more than males), and rural residence (15% more than urban). Variables associated with more problem behaviors were female (9% more than male), rural residence (16% more than urban) and education of high school or above (16-22% more compared to less than high school). Characteristics associated with task complexity included care recipient income below FPL compared to at or above (OR=1.36; 95% CI: 1.19, 1.57; $p<0.01$) and Hispanic/Latino race/ethnicity compared to non-Hispanic white (OR=1.23; 05% CI: 1.06, 1.43; $p<0.01$). Characteristics associated with higher odds of caring for a recipient with high health care use included black non-Hispanic (OR=1.54; 95% CI: 1.17, 2.03; $p<0.01$) and Hispanic/Latino (OR=1.26; 95% CI=1.01, 1.57; $p=0.04$) race/ethnicity compared to non-Hispanic white.

Conclusion: Numerous socio-demographic and health variables predict caregiver engagement in complex care, with many indicating disparities by race/ethnicity, gender, socio-economic status, and geographic residence. This information can be used to identify caregivers engaged in complex care and most in need of intervention; additionally, it can be used to advocate for policies, financial and other resources including respite care and paid help to reduce and address inequities in caregiver burden.

Funding: Flow through California State funds via Family Caregiver Alliance

SUPPORTING DIVERSE GROUPS OF FAMILY CAREGIVERS: A FOCUS ON NEW PROGRAMS AND POLICIES

Statewide Implementation of an Online Platform to Equitably Support Caregivers

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Aim: To describe implementation outcomes two years after initial statewide implementation of a web-based interactive resource information technology/platform supporting standardized caregiver assessment and provision of tailored resources (CareNav™) in the eleven California Caregivers Resource Centers (CRCs).

Background: California CRCs are a network of nonprofit agencies providing support and services for family caregivers. In 2019, the California Department of Health Care Services funded the 11 CRCs to expand and improve family caregiver services by deploying CareNav™ as a common platform accessed by clients and CRCs staff across the state. Technology implementation began in January 2020 and was complete by September 2020, enabling the first state-wide data base of caregivers and the challenges they face.

Methods: We used a mixed methods concurrent triangulation design to collect data from 114 anonymous electronic surveys and 24 focus groups and interviews with across CRCs leaders, staff and implementation team members. The survey included 15 items assessing Knowledge and beliefs, Self-efficacy regarding the implementation process and Readiness for change. The 45-60 minute interviews were performed via Zoom using a semi-structured interview guide focusing on CareNav™ implementation process, impacts on workflow and on serving clients. The data were collected in March to May 2022. The Consolidated Framework for Implementation Research guided the initial coding procedures then the Dynamic Sustainability Framework informed the interpretation/mapping of intervention site-level and system-level implementation outcomes.

Results: All participants highlighted standardized assessment, report generation and the client portal as useful CareNav™ features, while some used data to support client-provider and site-level functions and guide and evaluate selective outreach. We identified differences in implementation patterns in adoption of CareNav™ by CRC site. Developmental stage was shaped by baseline information systems at each site, the timing of CareNav™ launch, staffing, staff and leader attitudes toward implementation and centralization. In turn, participants identified several site-level structures, processes and outcomes impacted by the implementation process, including reorganization of staff and refining roles to accommodate the new workflow, team collaboration and business efficiencies. The dynamic process of developing a statewide common CRC identity involved a shift in service philosophy for some sites, balanced by the empowerment of developing a shared vision and processes and structures that foster greater inclusion across race/ethnicity and language groups.

Conclusion: The study identified individual and site-level factors related to the CareNav™ implementation process. The variability of developmental implementation patterns and the tendency to focus on individual client data before more advanced analytical processes provide evidence for a non-linear implementation course of a multi-component health information technology adoption across a diverse network, common for healthcare organizations. Future longitudinal studies should explore long-term adoption trajectories to inform continuous implementation planning.

Funding: Family Caregiver Alliance A20-3680; The Gordon and Betty Moore Foundation

SUPPORTING DIVERSE GROUPS OF FAMILY CAREGIVERS: A FOCUS ON NEW PROGRAMS AND POLICIES

Family Caregivers of Individuals with Parkinson's Disease in California

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Purpose: In a large cohort of family caregivers served by California's eleven statewide caregiver resources center (CRCs), we aimed to compare caregiving activities and outcomes among family caregivers of individuals with Parkinson's Disease and Lewy Body Dementia to those of other caregivers.
Background: Parkinson's Disease (PD) and Lewy Body Dementia (LBD) are closely-related, progressive neurodegenerative disorders that primarily affect older adults. PD/LBD can be debilitating, causing memory problems, loss of motor control and balance, and impacting the affected person's ability to independently perform activities of daily living. Many individuals with PD/LBD require support from a family caregiver. However, family caregivers of individuals with PD/LBD are infrequently studied.
Methods: We extracted data from CareNav^{TM} an electronic health record platform with standardized assessment of family caregivers served by CRCs across California between 2016 and 2020. We made comparisons between dyads with a care recipient with PD/LBD and other caregivers, including sociodemographic characteristics, caregiving activities, and health outcomes (e.g., loneliness, depressive symptoms, healthcare use), using chi-square and two-sample t-tests.
Outcomes: A total of 16,403 caregiver-recipient dyads completed intakes in CareNav^{TM}. Among these, 1,495 (9.1%) were PD/LBD dyads. PD/LBD caregivers were significantly ($p<0.05$) more likely to be in the 65-84yr age range (51.7% vs. 36.2%), report a spousal relationship with the care recipient (56.0% vs. 31.1%), identify as white (59.7% vs 49.0%), be retired (46.0% vs. 33.2%), and significantly less likely to report income below the federal poverty level (10.2% vs. 14.2%) compared to non-PD/LBD caregivers. PD/LBD caregivers were more likely to report caregiving for more than 5 years (40.6% vs. 30.1%), spending more than 40hrs per week on caregiving (78.5% vs. 71.9%), assisting with every activity of daily living (ADL) and most instrumental activities of daily living (IADLs), with a mean of 12.7 total activities (ADLs and IADLs combined) vs 11.7 activities among non-PD/LBD caregivers ($p<0.05$). PD/LBD caregivers were also more likely to report experiencing certain memory-related problem behaviors, specifically that the care recipient had difficulty not finishing or concentrating on tasks, and waking others up at night.

PD/LBD caregivers were more likely to report that their own health had declined in the past 6 months (37.5% vs. 31.9%) and that the care recipient's medical condition is worsening (94.3% vs. 88.3%). In addition, PD/LBD caregivers had significantly higher caregiving strain (Zarit buden score 8.7 vs. 8.3, $p=0.004$). However, there were no significant differences in other caregiver outcomes, including healthcare use, depressive symptoms, or loneliness.
Conclusion: PD/LBD caregivers represent a unique subgroup of family caregivers. Predominantly older and caring for a spouse, PD/LBD caregivers engage in intense and complex care, assisting with numerous activities and providing more hours of care. This population of family caregivers warrants focused attention, especially with their prevalent challenges, such as managing sleep problems, and maintaining the caregiver's own health.

SUPPORTING DIVERSE GROUPS OF FAMILY CAREGIVERS: A FOCUS ON NEW PROGRAMS AND POLICIES

Development of a Substantive Theory for Grandparent-Caregiving: The Grace Model

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Background: Caring for children is a complex undertaking in the best of circumstances. Being a primary caregiver to a grandchild is especially complex for grandparents who lack resources. Grandparents take on primary caregiving responsibility when parents are unavailable or unable to rear their children. In sub-Saharan Africa, prevailing reasons for grandparent-caregiving include parental illness/death due to AIDS and other diseases, and socioeconomic factors such as chronic poverty. Although sub-Saharan Africa has indicated reductions in new HIV infections compared to other regions, it remains the most affected region worldwide. Of the estimated 13.4 million orphans created by the HIV/AIDs epidemic worldwide, more than 80% live in sub-Saharan Africa and grandmothers often step forward to care for these orphaned children.

Purpose: In this paper, we described the process followed in the development of a substantive theory (GRACE Model) for grandparent-caregiving.

Methods: Using grounded theory methods (constructivist approach) and canons and procedures recommended by Corbin and Straus (1990), we followed three phases: 1) Data Collection and Early Analysis Procedures (Inductive and Deductive Approaches); 2) Developing Categories and Hypotheses About Relationships Among Them; and 3) Defining the Core Category and Building the Substantive Theory. Transcribed data from 32 study participants was coded using open, axial and selective coding (Corbin and Straus, 1990). The categories of conditions, strategies (action/interaction), and consequences from Corbin & Strauss (2015)' coding paradigm were used to further organize, analyze, and develop the identified subcategories and categories that constitute the GRACE Model. A deduction approach was also used to further develop conceptual ideas and identify deficits in our knowledge of the grandparent-caregiving phenomenon by reviewing pertinent literature on similar theoretic insights of existing theories. The qualitative approaches used to ensure rigor of our grounded theory study were reflexivity, relationality and theoretical sensitivity (Charmaz, 2006; Hall & Callery, 2001).

Results: The 'Grandparenting-caregiving' core category that emerged was described by seven key categories: Antecedents, Decision-making, Perceived Consequences, Coping and Adjustment, Caregiver, Care Receiver and Macrofactors.

Conclusions: To date, no theory has been developed to provide an explanatory model of caregiving as provided by grandparents for their grandchildren that we know of. Although the GRACE model does not offer an autonomous and generalizable theory, it provides an open model of a transferable substantive explanation of the caregiving experience of Ugandan grandparent–caregivers who care for grandchildren affected by the HIV/AIDS epidemic. Development and use of theoretical frameworks that are culturally appropriate can guide and enhance research procedures and highlight the key elements that shape observed social phenomena.

Funding: Substance Abuse and Mental Health Services Administration (MFP) Grant # 5T06SM060559-03

SUPPORTING THE NEXT GENERATION OF NURSING SCIENTISTS FOCUSED ON OBESITY AND RELATED HEALTH DISPARITIES

Supporting Early Career Nursing Scientists in Obesity and Related Health Disparities

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Purpose: Nursing science plays an important role in developing innovative solutions to address obesity-related health disparities. As such, supporting the next generation of independent, PhD-prepared nursing scholars represents an important step towards achieving health equity. This symposium will highlight the work of three early career nursing scientists and describe evidenced-based mentoring strategies to support their development.

Background: Training the next generation of nurse scientists to conduct transformational research that optimizes health and advances health equity is a priority for the National Institute of Nursing Research (NINR). Obesity and related diseases are particularly challenging in that they are the result of complex gene-environment interactions, emerge early in life, are increasing in prevalence, and disproportionately impact underserved populations. Therefore, developing a cadre of nursing scholars who are well-equipped to address the complexity of obesity-related health disparities is imperative for the nursing profession as well as society as a whole.

Description Best Practice: Mentorship is a professional and working alliance that fosters the personal and professional growth, development, and success of individuals through the provision of career and psychosocial support over time. Historically, mentoring systems have been structured to benefit the White, male, heteronormative, continuing generation, and upper- or middle-class mentee. There is an urgent need to develop mentoring approaches that meet the changing demographics of academic researchers, particularly those who are from and work with historically underrepresented groups in science. To address this need, we have developed a coordinated strategy to foster the development of promising early career nurse scientists who are focused on addressing obesity and related health disparities. The mentoring approach uses several evidence-based strategies that are designed to support the following 1) critical appraisal of literature, 2) formulation of sound research questions and development of testable hypotheses, 3) integration of rigorous scientific designs and research methodologies, 4) data analysis and interpretation, 5) dissemination of research findings, 6) understanding the process for securing extramural funding, and 7) building a professional network to support growth opportunities. The strategies include the use of the American Association for the Advancement of Science's (AAAS) Individual Development Plan (IDP) to identify key areas for growth, weekly group mentorship meetings focused on critical thinking and collaborative learning, developing a transdisciplinary mentoring team, fostering near-peer mentoring, and sponsoring career development opportunities such as this symposium.

Outcomes: Three scholars from the Edson College of Nursing and Health Innovation at Arizona State University will be showcased during the symposium. Timian Godfrey, DNP, is a PhD student who uses community-based participatory research with Native American communities to improve type 2 diabetes outcomes. Morgan Braxton, PhD, RN, is a postdoctoral fellow who applies mixed-methods approaches to understand the treatment response of adolescent females with obesity. Eyitayo Owolabi, PhD, RN, is a postdoctoral fellow focused on using mixed-methods approach to identify needs and design sustainable, and culturally competent interventions for reducing diabetes risk and improving outcomes in underserved communities.

Conclusion: Using evidence-based strategies to mentor early-career nursing scholars focused on obesity and related health disparities will support NINR's vision for nursing science.

SUPPORTING THE NEXT GENERATION OF NURSING SCIENTISTS FOCUSED ON OBESITY AND RELATED HEALTH DISPARITIES

Understanding Weight Trajectories of Adolescent Girls with Severe Obesity

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Purposes/Aims: The purpose of this abstract is to describe the methods utilized by an early career post-doctoral nurse scientist to explore the experiences of adolescent girls with severe obesity after losing at least 25% of their initial BMI through a residential weight-loss program.

Description of Method: Using qualitative descriptive methodology, we will attempt to reach out to 12 adolescent girls who participated in a residential weight loss program that resulted in BMI reductions of 35.8+/-6.2%. We will 1) explore the experiences of participants to understand how and why it was effective for them, and 2) evaluate their long-term weight trajectory, up to 2 years after returning home. Our semi-structured interview guide will include questions on participants' experiences in the program and how they were able to achieve their goals, as well as their transition home after completion of the program. We will seek to understand their current lifestyle behaviors, and how those evolved since completing their time in the program. This study will be guided by Pickett et al.'s middle-range theory of weight management. Given that participants who enroll in this program live across the country, online video platforms will be utilized for interviews. Member checking will be done, to establish credibility of the findings and promote mutual trust.

Linking Method to Practice or Research: As the numbers of obese children continue to rise in the United States, it is essential that the next generation of scientists be mentored to understand and intervene in this space where health disparities are prominent. As an early career nurse scientist, this scholar is rising to the challenge of promoting child health amid the complexities that exist today. She is an experienced pediatric nurse, participating in the training of a post-doctoral fellowship specifically to grow as a scientist with the skills to serve vulnerable and underserved groups. This study will be a key piece in building her expertise as a health equity scholar.

Conclusion: Understanding the experiences of female adolescents participating in a residential obesity treatment program and their experience in managing their weight after completion will advance the science surrounding obesity treatment. This experience will provide foundational data and training to allow the post-doctoral nurse scientist to become an independent health equity scholar, focused on improving the health and wellness of adolescent girls with obesity.

Fostering Diabetes Self-Care Among the Underserved Populations: A Call to Action

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Purposes/Aims: In the past seven years, an early career nurse scientist dedicated her research to understanding disparities in type 2 diabetes (T2D) in underserved communities in South Africa. This paper describes research findings and mentorship goals to support the transition to an independent scientist focused on promoting health equity among underserved populations.

Background: T2D is a complex health condition requiring medication and lifestyle modifications to attain treatment targets. Marginalized groups are heavily impacted by T2D, in part due to limited resources and lack of access to quality care. In an economically-disadvantaged province of South Africa, with a population that exhibits high rates of T2D, non-adherence to medications and recommended self-care behaviors will contribute to poor glycemic status and the development of complications.

Methods: This cross-sectional study assessed self-care adherence among 399 low-income individuals with T2D receiving care at six primary healthcare clinics in rural communities in South Africa. Socio-demographic and clinical data on disease duration and comorbidity were obtained by self-report. Depression was self-reported, while health belief, knowledge and adherence were assessed using validated measures. Data were analyzed using descriptive and inferential statistics.

Outcomes: The majority (81.7%) of participants were females, with a mean age of 62 ±11 years. Only 39% of the sample reported adhering to their prescribed medication regimen, 25% reported adhering to dietary recommendations, and 32% reported adhering to physical activity recommendations. The most cited reasons for non-adherence were lack of access (n=64) and cost of drugs (n=50), perceived high costs of healthy diets (n=243) and lack of time (n=181) for physical activity. Level of education was an independent predictor of medication adherence (OR (95%CI) = 1.73 (1.06-2.84); $p=0.031$) while diabetes knowledge was independently associated with both medication (OR (95%CI) = 2.45 (1.49-4.03); $p<0.001$) and physical activity adherence (OR (95%CI) = 2.00 (1.16-3.44); $p=0.013$). Positive health belief was independently associated with adherence to medications, dietary and physical activity recommendations.

Conclusions: Socio-economic reasons and access barriers were major drivers of non-adherence, while increased knowledge and positive health beliefs were potential facilitators.

Implications for Clinical Practice and Future Undertakings: The study findings demonstrate the need for clinicians and researchers to pay attention to individual, social and cultural barriers to T2D self-care in underserved communities. Based on the integrated theory of behavior change, healthy behavior and practices may be driven by the provision of information and positive health beliefs, which can be fostered by self-regulation and the presence of social facilitation. The early career nurse scientist aims to advance health equity by addressing upstream social determinants affecting engagement in self-care behaviors among disadvantaged populations. She will combat access barriers by leveraging health technologies and will bridge knowledge gaps through community empowerment programs. Her interdisciplinary mentoring team is comprised of experts in diabetes prevention, mixed-methodology, and technology-based interventions, all based at Arizona State University and are strong health equity scholars. She will leverage this training to support independent research and learn approaches for the successful engagement of community partners and designing sustainable, theory-driven and culturally competent health solutions with underserved communities.

SUPPORTING THE NEXT GENERATION OF NURSING SCIENTISTS FOCUSED ON OBESITY AND RELATED HEALTH DISPARITIES

Community Partnerships to Support Diabetes and Health for Native American Families

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Purpose: This paper describes the process by which a Native American nurse scientist will use community-based participatory research (CBPR) to improve type 2 diabetes (T2D) outcomes with a Southwestern Native American community.

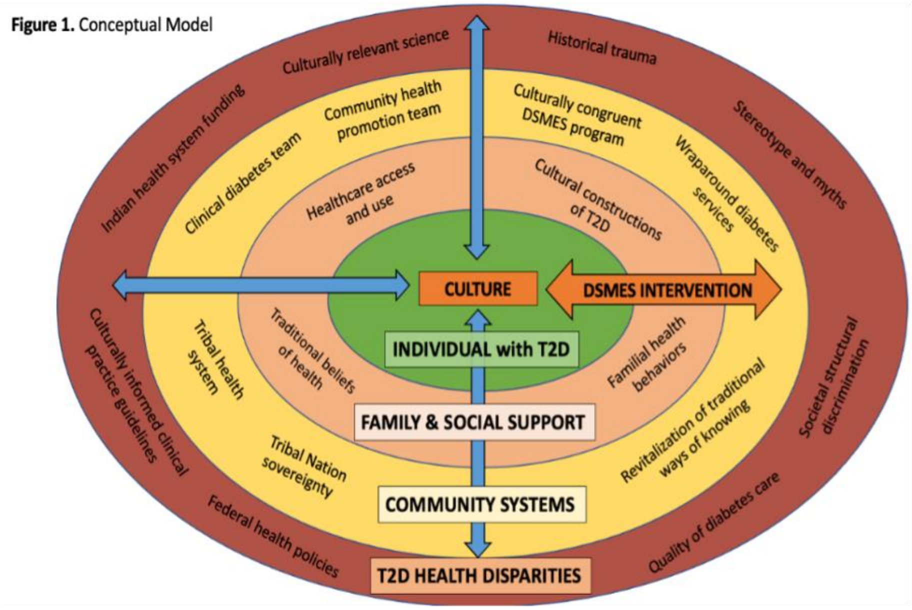
Description: The mentored health equity scholar is a nurse practitioner in a Native American community health system and her work with tribal leaders revealed diabetes as a priority health concern for the community. In response, a research approach was developed that leverages existing cultural, community and social strengths to improve diabetes-related health behaviors and outcomes in this population (Figure 1). The overall approach is guided by the National Institute of Minority Health and Health Disparities (NIMHD) framework adapted for American Indian and Alaska Native Nations. With this framework, individuals are viewed within the context of the family system since families are key stakeholders in T2D management. The integrated approach provides family and social units with culturally relevant skills for successful T2D management, healthy communication, and shared commitment. In addition to the individual and family, involving community systems is critical in addressing T2D health disparities. Creating a culturally adapted social support intervention will link T2D programming in tribal health systems to existing community programs for individuals with T2D and their families to enhance capacity and reduce the burden of T2D. The methodology aims to culturally-adapt a diabetes self-management and *support* (DSMES) intervention to meet the needs of Native Americans in Arizona with T2D.

Theoretical underpinnings of the methodology integrate systems pertinent to Native American culture and the influence these systems have on health behavior. CBPR methodology will include convening a community advisory board (CAB) inclusive of tribal council members and members from the clinical and community-based diabetes teams to be active partners in intervention development. The CBPR approach will explore the types of support systems that may be helpful and available for individuals living with T2D in the community, and how these systems may be integrated into DSMES. Collaborating with community stakeholders in co-creating a culturally adapted DSMES intervention will optimize long-term health outcomes for individuals with T2D and their families.

Link to Research: Despite supporting evidence, few interventions have included family support as a key factor to promote T2D management among Native American adults. Rigorous investigations of social support interventions for diabetes management for Native American communities are lacking. The proposed methodology will fill a gap in the scientific evidence regarding the potential efficacy of social support diabetes interventions and focus on improving health equity for Native American adults living with T2D. There is a need to create culturally relevant diabetes management strategies that support lifestyle behaviors by leveraging social support systems for Native American adults living on reservations.

Conclusion: The combined CBPR and SEM approach uniquely benefits the tribal community by addressing the need to develop interventions that focus on interconnected behavioral, social, and cultural factors that can reduce T2D-related disparities. The long-term goal is to establish and sustain system-level interventions that promote health equity within Native American communities.

Figure 1. Conceptual Model



USE OF INNOVATIVE CREATIVE ARTS EXPRESSION FOR RESEARCH, EDUCATION, AND PRACTICE

Innovative Creative Arts Expression for Research, Education, & Practice Symposium

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***Heather Coats**, PhD, APRN-BC, College of Nursing, University of Colorado, Aurora, CO*

Purpose: To describe five innovative programs of creative arts expression that are focused on improving health of persons needing care and experiences of the nurses who care for them.
Background: Many cultures have drawn on the creative arts for personal expression for centuries. Yet, information on the practical application of expressive creative arts within healthcare is lacking. The separation of art and science in the traditional biomedical model has led to gaps in understanding how expressive creative arts can be integrated into healthcare to foster well-being for those receiving care and the nurses providing care.
Methods: Throughout this symposium, each individual presentation will provide descriptions of how their expressive creative arts program has been integrated into healthcare. These presentations cover broad and innovative uses of creative arts in research, education, and practice. As all programs have been conducted or are continuing to be conducted during the pandemic, each presentation will also provide insights into how various technologies were employed to support necessary adaptations.
Results: Grounded in Narrative Inquiry, the first presentation will describe methods of painting as an analytical reflective practice for nurse scientists. With a nursing practice approach, the second presentation will examine the results of a study on the feasibility, usability, and acceptability of technology to conduct a Person-Centered Narrative Intervention study in adults living with serious illness. Building on a similar use of narrative, the third presenter will describe the utilization of a virtual technology that facilitated art and narrative with adolescents and young adults living with advanced cancer. For the creative arts educational lens, the fourth presentation will speak to an “Art of Nursing” project. This project is building a movement of nurse artists to inspire creativity as a way of healing themselves and each other by creating a Nurse Artist Gallery where nurses will share their aesthetic work. Finally, the fifth presentation will illustrate the use of a multitude of art mediums with pediatric nurses and innovative avenues of dissemination to bridge the connections across practice, education, research, and public-facing communities.
Implications: In the current landscapes of healthcare, there is an urgent need for healing in healthcare at many levels. The use of creative expressive arts provides healing avenues for positively impacting the key constituent’s well-being, both for nurses and those they care for. Consistent with the 2023 WIN conference’s focus on leveraging technology to advance nursing in research, practice, and education, each of these abstracts highlights the variety of ways creative expressive arts and technological modalities can be integrated into research, practice, and education.

USE OF INNOVATIVE CREATIVE ARTS EXPRESSION FOR RESEARCH, EDUCATION, AND PRACTICE

Painting as an Analytic Reflective Practice Using Narrative Inquiry

***Rachel Johnson-Koenke**, MSW, LCSW, Caritas Coach, University of Colorado Denver, Aurora, CO; **Emily Gamm**, LCSW, CAS, College of Nursing, University of Colorado, Aurora, CO*

This abstract illustrates how paintings can be used to examine and reflect on narrative data as a whole analytic unit. Using an aesthetic reflection can create an opportunity for consideration and provide additional avenues of inquiry for nursing scientists. In addition, learners will be able to consider aesthetics, diversify ways of knowing, and develop deeper inquiry into narratives and their meanings for patients and their families using a critical conscious pedagogy and praxis (Carter, 2007).

Multiple ways of knowing are essential to nursing inquiry. Narrative inquiry (Riessman, 1990, 2002, 2003, 2008, 2015; Riessman & Quiinney, 2005) is a qualitative methodology that uses complete stories as large analytic units instead of breaking down text or concepts into smaller analytic units. Using aesthetic reflection has been used in education and therapeutic milieus. Seeking alternative ways of knowing, pushing beyond conventional pedagogical boundaries, and engaging critically and creatively empowers learners to participate actively in the construction of a new reality, and subsequently, transformation of their world. This study expands aesthetic reflection to narrative inquiry methodology.

Methods: In this study, the investigator co-created narratives with veterans living with heart failure. Using narrative inquiry with an aesthetic component, the investigator then meditated on each individual’s narrative and worked to put paint on canvas while reflecting on the narrative. The investigator focused on what the narrator was saying across the story, what was the essential message they were trying to express, what were they not saying, the context, and the relationship of power in sanctioned and unsanctioned stories.

Results: The investigator found five key themes, one for each story, and painted each. As the paintings came to fruition, the key theme of each story came to light. Painting allowed the investigator to reflect nonverbally on the story itself and added a depth of analytic perspective that helped move the analysis forward. By exploring an aesthetic, not just cognitive, way of knowing, the analysis was able to reach a further depth and towards critical consciousness (Hooks, 2013), a practice of freedom, transcends educational boundaries and moves learners from a position of passivity to creatively intervening in their world. Pictures also allowed the author to present analytical results in a visual way which informed potential dissemination of results. By having a visual reference for each key theme, dissemination allowed for aesthetic reflection for the audience as well.

Implications: Using aesthetic reflection as a part of narrative inquiry can be a method of exploring more in-depth analysis of themes and creating space for creative reflection. Exploring all ways of knowing can be a powerful analytic tool as well as a means for dissemination. Using paintings to explore themes within narratives powerfully shifts and expands knowing and learning toward a critically conscious pedagogy.

USE OF INNOVATIVE CREATIVE ARTS EXPRESSION
FOR RESEARCH, EDUCATION, AND PRACTICE

Integration of Person-Centered Narratives in the Electronic Health Record

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Purpose: Describe the acceptability, feasibility, usability and proof-of-concept of the integration of person-centered narratives in the electronic health record in two settings: outpatient and inpatient settings in an academic health care system.

Background: Disparities in palliative care for persons living with serious illness exist because of lack of culturally sensitive person-centered psychological, social, and spiritual palliative care interventions. Person-centered palliative care communication interventions must be informed by the perspectives of patients who are living with their serious illness. Yet, there is a lack of research about how to efficiently and effectively integrate a person-centered narrative into the electronic health record (EHR).

Methods: Using the Consolidated Framework for Implementation Research, we have conducted three studies refining/defining/testing the integration of person-centered narratives into the electronic health record. Our first study was a feasibility study in an acute care inpatient setting. Building on this, our second study was a mixed-methods embedded proof-of-concept randomized controlled trial in the same setting. Our third study was a feasibility study in same health care system, conducted all virtually in an outpatient setting. The central hypothesis is that the implementation of a person-centered narrative intervention (PCNI) into the EHR among patients with serious illness will result in improved communication between a patient and their clinicians, and have positive effects on a person's psychosocial and spiritual well-being.

Results: Our initial study was feasible, acceptable and usable for hospitalized persons living with serious illness (n=20) and their clinician (n=19). Our second study (51 persons and 17 nurses) was feasible, acceptable, and provided early efficacy (proof-of-concept) of quality of communication. Study enrollment rates demonstrated both patient and nurse interest in and acceptability of the intervention and study activities. Importantly, collecting the study's patient-reported outcome measures at 3 time points (T1= baseline, T2 (immediately post narrative upload, and T3 (24-48 hours post narrative upload) in the acute care setting has also been proven feasible with 92.9% retention at T2 and 78.6% retention at T3 (note: retention rates at T3 were >90% before COVID-related study interruptions). Efficacy analyses show intervention impact on patient-reported quality of communication. Quality of Communication baseline-adjusted means by condition at T2 and T3 had moderate effect sizes (Cohen's d = 0.49 at T2; d = 0.29 at T3). Patient's reported quality of communication and feeling heard and understood were both associated with lower anxiety and depression, with an average *r* value of 0.32. Our third feasibility study (virtually delivered for persons receiving care in an outpatient palliative care clinical setting was feasible, acceptable and usable for persons living with serious illness (n=20) and their clinicians (n=7).

Implications for Research and Practice: The integration of a PCNI into the EHR is feasible, acceptable for both persons living with serious illness and their clinicians and shows initial proof-of-concept on patient's reported quality of communication. Larger randomized controlled trials, with concurrent collection of implementation data, should be conducted to more fully test and understand the key components of the effects of the PCNI.

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Say It with Colors: A Digital Expressive Narrative Art Intervention

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Purpose: To describe an innovative method applying narrative and digital art for self-expression to illustrate adolescent and young adult (AYA) experiences with hope while living with advanced cancer.

Background: Traumatic experiences such as cancer may impose a loss of direction and narrative which previously guided a person's life. Traumatic experiences are mentally stored as imagery. Expressive artforms such as composing narratives and drawing integrate neurodevelopmental and sensory knowledge and may help AYAs process their experiences with cancer, develop new narratives, and reconnect to their truest selves. Creative art stems from the desire to creatively respond to fears and challenges, which may yield emotional satisfaction and calm from the controlled behaviors of shaping time and space into understandable forms. AYAs are in a peak developmental period for creativity and therefore amenable to digital expressive narrative art activities.

Methods: Our study used digital expressive narrative art (multimedia creation of narratives and digital art) to conceptualize hope in a sample of AYAs who have advanced cancer. This descriptive qualitative study enrolled a purposive sample of AYAs diagnosed with advanced cancer who were recruited through online advertisements at an academic medical center and non-profit organization. Participants used Zoom to complete semi-structured interviews and digitally illustrate their experiences with hope while living with advanced cancer. During interview one participants remotely accessed and controlled the "Paint 3D" application on the researcher's computer to create their illustrations in real time. Participants created either patterns of their levels of hope over time or a single illustration, narrated their meanings, and described the purpose of their color choices. Information shared during the interviews were formatted into narratives co-written by the participant and researcher. Participants used colors and fonts to emphasize various parts of their narratives. During interview two, participants member-checked and finalized their written narratives and illustrations, which participants kept as mementos for reflection.

Outcomes Achieved: Digital expressive narrative art provided an innovative method for self-expression among AYAs living with advanced cancer. Digital expressive narrative art helped participants articulate the role and significance of hope during cancer treatment. Our participants found virtual research participation and digital expressive narrative art creation acceptable. Additionally, participants reported creating written narratives and illustrations helped them mentally process difficult experiences associated with their cancer treatment.

Conclusions/Implications: Digital expressive narrative art may be used to help AYAs living with cancer mentally process difficult experiences through writing and drawing. This method may also help clinicians identify when AYAs may require additional emotional support. Further research is needed to expand the accessibility of digital expressive narrative art to the AYA community.

USE OF INNOVATIVE CREATIVE ARTS EXPRESSION FOR RESEARCH, EDUCATION, AND PRACTICE

The Art of Nursing through Nurses Guild

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Purpose: The purpose of this presentation is to share "Art of Nursing," a 40-hour contact hour course, as a project to invite nurses to integrate creative arts into their personal and professional lives as a means to care for themselves and regenerate the passion and purpose for nursing.
Rationale/Background: Nurses are in a crisis of confidence, trapped in business models driving clinical practice that cause role conflict. The conflict between nursing work and values creates moral and ethical dilemmas resulting in personal disconnection, emotional distress, frustration, anger, and apathy. *Nurses Guild, the platform for "Art of Nursing" course,* is where caregivers recharge and reconnect with the core reason they entered the profession: to truly heal individuals and communities. *Nurses Guild* is on a mission to bring *care* back into caregiving when we need it most. With over 3,000,000 nurses in the U.S. alone, think about how many lives would be touched and even saved — especially those of our frontline caregivers — if we took better care of *Nurses*. *Nurses Guild* does that via mindful aesthetic exploration and connection to purpose with like-minded nurses. *Nurses Guild* offers online interactive forums and transformative artistic experiences to *heal* the burnout nurses suffer from practicing, at times limiting *and disempowering,* within the healthcare system.
Approach: This course is a transformational journey to reclaim the inner artist as part of the *Art of Nursing*. It is an online, publicly available 8-week course. It is an engaging, interactive experience in a safe small community of nurses. Each nurse explores their innate creativity by exploring multiple modalities of art expression; for example, self-portraits, painting, spoken word, poetry, and gardening. It includes anything they consider creative. This project is building a movement of international nurse artists to inspire creativity as a way of healing themselves and each other by creating a *Nurse Artist Gallery* where nurses will share their aesthetic work.
Outcomes Achieved: The **"**Art of Nursing" course facilitated the essentials of self-caring for nurses (loving kindness toward self/others): innovative humanistic education, expanded models of education and diverse perspectives on knowledge, ways of knowing, integrating novel creative arts and humanities into clinical practice, and translating 'sacred activism' into informed moral action. As of April 2022, this course has been offered four times, with an average cohort of 18 nurses. The feedback has been positive and powerful; for example, several participants have implemented art as a healing modality into clinical settings. The *Nurses Guild Art Gallery*, a virtual platform, is being created to encourage a professional community where nurses connect, grow, reflect, and support each other. The *Nurses Guild* reached over 10,000 nurses, and the Facebook group has grown to 2,000 nurses.
Conclusions: *Nurse Artists* are the change-makers of the future of healthcare. Nurses are artists; existential-spiritual advocates to create healing for personal health and clinical caregivers. The intention is to create a conscious community where the expertise and experience of visionary learners are channeled into meaningful work and service to help themselves, each other, and the planet.

Funding: The "Art of Nursing" through the Nurses Guild platform was endorsed and sponsored by Watson Caring Science Institute (WCSI), an international non-profit organization, and Dr. Jean Watson (nurse caring theorist and founder of WCSI).

USE OF INNOVATIVE CREATIVE ARTS EXPRESSION FOR RESEARCH, EDUCATION, AND PRACTICE

Using Expressive Art to Translate and Disseminate Research to Communities

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Purpose: The purpose of this presentation is to describe a research-based best practice method to disseminate research through participatory art exhibits across research, practice, education, and public-facing settings.

Study Background: The completed research study captured the impact of the pandemic response on nursing practice and the individual nurse using a social-science case study design conducted through a pediatric medical system. Qualitative and quantitative data were collected from January 2020-March 2021 from 30 pediatric nurse clinicians and leaders. 90% of participants depicted their professional and personal pandemic experiences via expressive art. Across participants and the research team, 37 pieces of original artwork were collected.

Description of Dissemination Method: Dissemination methods outlined by Bruce et al. (2013) were used to incorporate art to create an art gallery to offer new ways of understanding research findings.

Linking Dissemination Method to Practice: The immersive art exhibition included composed music, photography, poetry, mixed media, paintings, artifacts, and data art. The exhibition conveys the identity of pediatric nurses, barriers to care delivery, nursing's agility to overcome chaotic environments, and the complexity of the human experience in which individuals seek to be seen and heard. The goals of the exhibition are to create a professional community to discuss nursing practice, invoke healing, and encourage sacred activism. Exhibitions have been held via a public community event hosted by a college of nursing, clinical sites, Ph.D. intensives, and local conferences.

Outcomes of the Art Exhibition: Nurses who participated in the research study had a cathartic and empowering experience through narrative and art, which was brought forth through the exhibition. To date, there have been five exhibitions with up to 75 attendees at any given time. The public community exhibition in mid-2022 included a participatory art aspect for attendees to share their pandemic experiences in which two large canvases were created. Art exhibit outcomes have included an emotional, visceral, and memorable view of the pediatric nurse pandemic experiences as expressed by public and healthcare community attendees. Attendees have discussed professional issues and expressed the need for action. Nurse attendees have expressed validation and noted that study findings and exhibits have given them words to their pandemic experiences they did not previously have which has been healing. Attendees noted having a more thorough understanding of research findings that accompanied art. Some attendees have sought consultation on applying for Ph.D. programs and clinical research mentorship. Numerous attendees have expressed interest in using art therapy as self-care in their clinical settings.

Conclusions: The method of using art exhibits to translate research results is valuable to engaging nurses in their professional practice. The use of art exhibits has provided understanding and a means to connect populations studied, the pediatric nurses to their research results, and connect the larger healthcare community to nursing practice issues. Art exhibitions have created a professional community for nurses to reflect professionally and have offered a means to heal from trauma and celebrate the creative use of self. This method can be considered a valuable way to disseminate research findings.

Funding: Children's Hospital Colorado Foundation

WHAT EXACTLY CONSTITUTES NURSING EPISTEMOLOGY? PHILOSOPHICAL DEBATES AND WHAT'S AT STAKE

What Constitutes Nursing Epistemology? Philosophical Debates and What's at Stake

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Purpose: The purpose of this symposium is to identify and problematize 1) currently dominant representations of nursing epistemology in the American nursing literature that underpin what nurses define as 'nursing science', 2) what the product of this science is supposed to entail in terms of knowledge, and 3) how this knowledge is connected to or manifested in nursing practice.

Concept: One seemingly unproblematic definition of science, cited in Nursing Science Quarterly, is an "identifiable, discrete body of knowledge comprising paradigms, frameworks, and theories." However, this understanding implies that the world consists of that which can be discretely identified and codified into pre-existing structures of knowledge (e.g., theory, framework, etc.). More problematically, it defines science independently of nursing, which thus brings us to the issue that Mark Risjord, a philosopher of science, brought up in his 2010 book titled "Nursing knowledge: Science, practice, and philosophy," that we are "still addressing a question that has pestered nursing scholars for decades: What is *nursing science*?" Moreover, as recently as 2020, nursing scholars have argued that to get "back to science" we should reject focusing on nurses themselves because "science" in nursing is limited to the study of patient health. This symposium will question the epistemic assumptions guiding these issues and examine their consequences in terms of how we orient to science, nursing science, and nursing practice.

Linking Concept to Practice/Research: The first abstract, titled "Philosophical 'isms' in nursing science: What we choose to know," will articulate dominant epistemological perspectives that guide mainstream nursing science and demonstrate how they produce epistemic gaps that have real-world consequences in terms of what is silenced or made invisible through scientific practice and hence block possibilities for health and well-being. The second abstract, titled "Bringing philosophy of science to new views on nursing theory," will articulate novel contemporary philosophical ideas about scientific knowledge that can be used for advancing disciplinary work in developing nursing theories for 21st century nursing practice, highlighting the synergies that occur in bringing together philosophical and nursing perspectives to produce more robust accounts of nursing knowledge in and for practice. The third abstract, titled "Rereading Carper's patterns of knowing through Peirce's philosophy of inquiry" uses the resources of Charles Sanders Peirce's philosophy of inquiry to re-conceive the world as an ongoing evolutionary process and propose a method of inquiry that can account for it intelligibly. Peirce's philosophical method of inquiry affords a 'pragmatic' orientation to 'knowledgeable action' that does not bifurcate reasoning into distinct domains, such as empirical and esthetic, and hence affords a reconceptualization of Barbara Carper's distinct patterns of nursing knowing into a cohesive logic of nursing science and practice.

Conclusion: The symposium ends with a dialogue engaging the audience about whether and/or how the concepts articulated helped (or not) to enrich and advance understanding of what constitutes nursing science, practice, and knowledge, and discussion of considerations for the future of nursing epistemology.

WHAT EXACTLY CONSTITUTES NURSING EPISTEMOLOGY? PHILOSOPHICAL DEBATES AND WHAT'S AT STAKE

Philosophical "Isms" in Nursing Science: What We Choose to Know

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Purpose/Aims: The purpose of this presentation has two components, 1) to identify dominant epistemological perspectives chosen to guide nursing science, and 2) to describe the epistemic gaps and their consequences for the future of nursing science in terms of what is silenced or made invisible.

Description of Concept to Be Discussed: Epistemology is the study of the nature of knowledge and truth, ultimately, aiding us in determining what is considered right or justified knowledge for our discipline. Epistemological perspectives sometimes referred to as *isms* or philosophies of science, aid nurse scientists in determining the substantive focus for their scholarship, theoretical development, and methodological direction. The chosen, and eventually guiding, epistemological perspective influences what the nurse scientist deems of value for our discipline – ultimately, deciding what knowledge is produced and accessible. These dominant epistemological perspectives chosen to guide nursing science have found primary influence from the Western philosophical tradition; many of which have roots in controversial beliefs and values. This is not to say that all isms stemming from the western-philosophical tradition are not of value. Instead, it is to promote the understanding that non-western philosophical traditions or blended views, both historical and contemporary, have faced resistance in adoption due to concerns or rigor, and one could argue familiarity, resulting in epistemic silencing (Valderama et al., 2022), and epistemic oppression as described by philosopher Dotson (2014). Isms, are ultimately a shared epistemic resource, and within the discipline of nursing, these selected resources determine knowledge production - our epistemic power.

Logic Linking to Practice and Research: Consequences of dominant isms within nursing have begun to surface within research, practice, as well as education. An example is the application of "raced-based" variables which assume biological determinism rather than social determinants of health. It is argued that these consequences are related to the epistemological gazes we take and the aligning methodological approach. With the broadening of what is considered our epistemological schema, nursing research and practice have the potential to promote our discipline to be more representative, inclusive, and accessible to advance human and non-human health and well-being.

Conclusion: As proposed by Smith (2005), to decline to question is to take for granted. Without critical examination of the epistemological perspectives we have chosen, along with the "why" of that choice, we fail to expose and acknowledge our implicit assumptions or biases about knowledge production. Moreover, without consideration for those epistemological perspectives we have not chosen, we resist change and the advancement of our discipline inclusively. What is at stake is the future of nursing science, and ultimately our disciplinary knowledge.

WHAT EXACTLY CONSTITUTES NURSING EPISTEMOLOGY? PHILOSOPHICAL DEBATES AND WHAT'S AT STAKE

Bringing Philosophy of Science to New Views on Nursing Theory

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Purpose: This presentation extends current understanding of knowledge development to propose formation of nursing theory through the intersection of the practice of science and the practice of nursing care. The perspective supporting this proposal is *intermodernism* (Reed, 2019), a philosophy of nursing science developed to inhabit the middle ground between the scientific realism of standard post-positivism and anti-realism of scientific constructionism. By this view, nursing theory is a pragmatic process of offering up explanations of observed health patterns and processes that integrate disciplinary values with traditional scientific standards.

Description of Concept to Be Discussed: Nursing theory is a central epistemological component in our philosophical canon. Theory is a conceptual structure systematically developed and evaluated, yet dynamic and relevant across selected contexts to explain how entities may be related (Reed, 2018). Theory is no longer limited to a deductive axiomatic system tethered to unchanging natural laws. Theory proposed from contemporary philosophy of science incorporates the standpoint of nursing practice (its insights, expertise, values, and emancipatory goals) along with empirical research into knowledge generation and theory development. As Peplau proposed five decades ago, nursing practice mediates nursing knowledge.

Logic Linking to Practice and Research: Intermodernism is a philosophical perspective for dislodging dichotomous thinking about nursing theory. Historically, disciplines have compartmentalized patterns of knowing, science and values, theory and practice, discovery and application. A pragmatic approach to theory recognizes nursing practice as not only an aesthetic pattern, but an epistemic practice and critical source of knowledge (Reed, 2018, 2019). It acknowledges the disciplinary perspective and situatedness of the knower, and considers this stance an epistemic advantage not a disadvantage in theory development (Longino, 2008). The knower is the one practicing *nursing:* engaging in trustworthy actions and interactions that foster human-environment-health processes. This theorizing engages practitioners' knowledge – too often conceptualized as private and inarticulable, intuitive, or tacit. To move nursing science forward, we need to better explicate and systematically incorporate the private knowledge from practice into nursing theory.

How might practicing nurses participate in originating nursing scientific theory? One path, identified by nursing theorists and philosophers of science, is by non-linear, abductive reasoning. Peplau's cycle of inquiry suggested a path in terms of peeling out concepts and their associations to construct plausible explanations of nursing phenomena. Another path involves the strategy of theory modification based upon practicing the theory, or by testing and evaluating the theory in practice-based research.

Conclusion: I have staked out a philosophical middle ground that draws from perspectival realism (Giere, 2006) and standpoint epistemology (Reed, 2022) to incorporate nursing practice, science, and values in theorizing about nursing phenomena. Nursing theory is *informed by* as well as is a *guide for* nursing practice. An ongoing project is to articulate practice-based paths for theory innovation about human healing processes. What's at stake --by staying on the beaten path-- is the uniquely *nursing* resource of practice for building nursing theories that sustain the discipline and address 21st century health and healthcare challenges.

WHAT EXACTLY CONSTITUTES NURSING EPISTEMOLOGY?
PHILOSOPHICAL DEBATES AND WHAT'S AT STAKE

Rereading Carper's Patterns of Knowing through Peirce's Philosophy of Inquiry

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Purpose: Charles Sanders Peirce was a 19th century scientist-philosopher who acknowledged the 'fact' of instability/uncertainty in the world and philosophically worked out the consequences of a "chancy" world in terms of a scientific method of inquiry. This paper (a) provides a brief overview of the evolution of Peirce's method of inquiry, (b) elucidates significant points of intersection with Barbara Carper's fundamental patterns of knowing in nursing, and (c) moves towards a transformation of Carper's different "kinds of knowledge" into a cohesive logic/epistemology for nursing.

Conceptualization: Peirce overcame the illogical epistemological consequences of the ontological dualism of mind and matter, dominant since Descartes and still implicitly accepted by many sciences (including nursing) by reconceiving the world as a logical production via signs interpreted through the process of semiotic inquiry. In this way Peirce could demonstrate continuity between the natural and the human, and indeed every part of the world. Peirce's semiosis addresses an inexhaustible world, transforming traditional notions of knowledge as the predicates of pre-existing entities towards a notion of knowledge qua *function*. In this way 'what exists' is transformed into *that which awaits inquiry*. Thus, knowledge of the world becomes an ongoing evolutionary semiotic process of interpretation which is expressed ontologically - the world qua metaphysical product of a *method of inquiry*. Peirce's method of inquiry reconciled guessing/intuition and reasoning/logic so that instinct or intuition became of-a-piece with reasoning. Peirce reconceived 'instinct' or intuition as an esthetic process permitting into inquiry that which can evolve into regularity, or what we consider the traditional goals of scientific inquiry, generalized concepts. Peirce's esthetic inquiry involves the sense of feeling that-which-does-not-yet-signify, meaning, chance. This 'apprehension' of chance constitutes the work of bringing the new into the fold of the interpretative process to thereby "further the development of concrete reasonableness."

Linkage to Nursing Practice and Science: Nursing scholars and clinicians keenly understand that nursing happens amidst a dynamic, ever-changing context and it happens through 'knowledgeable action' and not through an unrepresentable, ineffable process of 'guessing' - hence Carper's diverse patterns/domains of knowing. Peirce's philosophical method of inquiry affords an orientation to 'knowledgeable action' that, importantly, does not bifurcate reasoning into distinct domains, such as empirical and esthetic, which is philosophically problematic in prompting as-yet unanswered (unanswerable?) questions about how each domain functions and interacts with each other to result in 'knowledgeable' nursing practice.

Implications: Peirce's method of inquiry emphasizes how feeling and fact are not opposed and explicitly foregrounds indeterminacy/chance for reasoned discourse. Peirce's work removing the boundary separating esthetic and logic to construct a cohesive method of inquiry provides philosophical underpinnings for rereading Carper's distinct 'patterns of knowing' as a method of nursing inquiry qua practice whereby "the world lives" and nursing breathes in its possibilities with the goal of bringing forth health-as-a-difference (something new brought into the fold). Such philosophical rereading of Carper's important work affords opportunities to fruitfully elucidate its creativity for and emergence in nursing in ways that can inform the "cultivation" of esthetico-logical inquiry in nursing education and practice.

ABSTRACTS OF PODIUM PRESENTATIONS

Mental Healthcare Redesign: Voices of Adolescents with Chronic Conditions

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Purpose: In 2021, suicide became the leading cause of death for adolescents in Colorado[1]. Before the Covid-19 pandemic, adolescents aged 10-17 with chronic conditions had four times the odds of self-harm than peers without chronic conditions – a severe mental health disparity[2]. This disparity was exacerbated with > 50% increase in emergency department visits and hospitalizations due to adolescent self-harm from pre-pandemic levels[3]. In January 2022, the Children's Hospital Association declared the children's mental health system in crisis and requested urgent Congressional investments[3]. A transformation in adolescent mental health care delivery is needed to address this pressing health challenge. Little is known from the perspective of adolescents with chronic conditions what needs to change. This gap in knowledge prevents informed allocation of investments. The purpose of this study was to understand how adolescents with chronic conditions would redesign adolescent mental healthcare delivery to better meet their needs and inform health resource allocation.

Approach: An interpretive phenomenological approach was used to conduct semi-structured interviews with adolescents with chronic conditions, age 10-21 years. The study was conducted between January and March 2022 at three sites across a large academic children's health system as part of a larger parent study. For the larger study, participants were randomly sampled from an adolescent medicine practice, a pediatric primary care practice, and a pediatric emergency department across the north, central, and southern regions of a statewide academic children's health system. Purposive sampling from the larger participant pool was used to assure a demographically diverse sample. Interviews were recorded using Atlas.ti® and transcribed manually and electronically. Standard methods to assure credibility, dependability, confirmability, and transferability were applied including field notes, peer debriefing, reflexive journaling, member checking, meticulous record keeping, and weekly research team meetings. Data were analyzed inductively and deductively using first, second, and third order analyses until information saturation was achieved.

Outcomes: Seventeen participants aged 10-20 provided data (mean age 15 years, 52.9% female, 58.8% white; 64.7% Hispanic or Latinx, 11.8% Black or African American, 12% American Indian or Native American, 23.5% LGBQT+). The overarching theme extracted from the data was: 'They need to reach out to us. Check in on us.'. Supporting themes were: 'Brushed off and unheard'; 'I need someone I can really talk to and trust'; and 'The school nurse is for physical illness only.' The study was conducted in urban and suburban settings. Findings should be interpreted with this limitation in mind.

Conclusion: The findings suggest adolescents with chronic conditions would redesign a mental health system that proactively engages them and prioritizes fostering the patient-provider bond to better meet their needs. Importantly, the role of the school nurse has opportunity to be strengthened and leveraged. Nurses across academia, policy, and practice settings can apply these findings to allocate resources when redesigning and transforming adolescent mental health systems. This study adds to the scientific evidence needed to innovate and test novel models of adolescent mental healthcare delivery – and address this pressing health challenge.

Funding: Doris Kemp Smith Research Award University of Colorado College of Nursing

ADOLESCENT HEALTH

Promoting Vietnamese American Youths’ HPV Vaccination through Digital Storytelling

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Purpose: This study aimed at testing a culturally and linguistically congruent digital storytelling (DST) intervention for Vietnamese American (VA) mothers to promote their children’s Human Papillomavirus (HPV) vaccination.

Background: Despite higher rates of HPV-associated cancers in VAs, their vaccination rates remain low. Mothers’ attitudes, beliefs, and intentions to have their children vaccinated are keys for promoting HPV vaccination, but few interventions have been developed for the VA population. HPV-associated cancer disparities experienced by the VA population can be potentially mitigated by using culturally grounded narratives incorporating culture-specific beliefs and practices to promote their HPV-related knowledge, attitudes, and vaccination. DST, an innovative community-based participatory research method, has shown to be effective in promoting health behaviors.

Methods: *Design*: the study included two phases to develop a DST intervention and testing the preliminary effectiveness of the intervention in a community group. **Phase I**: We co-developed two culturally congruent, first-person, audiovisual digital stories about HPV vaccination with VA mothers of *vaccinated* children. The stories (2-3 minutes each) were produced in both English and Vietnamese through a two-day workshop in collaboration with two VA first-generation immigrant mothers. **Phase II**: We examined effects of the DST intervention from Phase I on vaccination intent among VA mothers of *unvaccinated* children aged 11-14. Mothers viewed the stories and filled out an anonymous online survey immediately before (T0) and after the intervention (T1), and at the 2-month follow-up (T2). *Sample/Sampling.* We used purposeful sampling to recruit 114 VA mothers (mean age = 41.5 years, SD = 5.4; 35.2% immigrants; 51% with a child receiving free or reduced-price lunch at school) with unvaccinated children for Phase II activities. *Data analysis*. We conducted univariate (e.g., means, frequencies) and bivariate analyses to describe distributions of key variables (e.g., attitudes, intention) and their associations. Paired-sample t-test and McNemar’s test were used to examine changes in key variables over time.

Assessment of Findings: After receiving the DST intervention, mothers (N = 114) showed more positive attitudes toward HPV vaccination, and the proportion intending to have their children vaccinated increased from 53% to 74% (OR = 9.12; Cohen’s g = .40; c^2 (1, N = 114) = 17.63, $p < .001$). Mothers also demonstrated high levels of identification and engagement with the stories. At the 2- month follow-up, 61 mothers (54%) reported that their children received the first HPV vaccine dose.

Conclusions/ Implications: This study’s findings suggest that a brief intervention using digital stories was feasible and acceptable, and they provide preliminary evidence for effects on promoting VA mothers’ intention to have their children vaccinated against HPV and on initiation of the vaccine course. This innovative culturally grounded DST intervention has strong potential to promote HPV vaccination in this underserved population. This study will guide development of similar health promotion efforts for other contexts and racial/ethnic groups to reproduce and broaden this work for wider dissemination via a noninvasive, easy-to-deliver, inexpensive, and holistic approach.

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Teen Sexual Values, Family and Parent Connectedness after Sexuality Health Education

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Purpose: The purpose of this study is to: 1) Describe the association between adolescents' understanding of their own sexual values and parent communication about sex and family connectedness, 2) Assess change in adolescents' understanding of their own sexual values before and after participation in an evidence-based sexuality education intervention, and 3) Explore the moderating influence of parent communication and family connectedness on adolescents' understanding of sexual values after intervention participation.

Background: Parents/families have significant influence on the development of their children's sexual values and sexual behaviors that persist well into adulthood. Family communication is a direct way for parents and families to share their sexual values with adolescents. Family connectedness and sexual health communication have consistently been associated with adolescent abstinence, delay of sexual debut, and fewer sexual partners. However, the relationship between family interactions and adolescents' understanding of their own sexual values is less understood, as is distinguishing differences in family connectedness and parent communication as separate influences adolescents' understanding of sexual values.

Methods: This is a secondary data analysis of a sexuality education intervention. Participants completed a 54-item survey before and after 6 education sessions. One item, "I have a clear understanding of my sexual values," was the dependent variable for these analyses. Two scales were created to assess family connectedness ($\alpha = 0.91$) and parent communication about sexual health topics ($\alpha = 0.86$). Bivariate regression models were used for Aims 1 and 2; Baron & Kenny moderation models were used to describe the strength of the effect for family connectedness and parent communication as moderator variables on changes in understanding of adolescents' personal sexual values pre- and post-intervention participation.

Outcomes: Pre-intervention, there were strong, significant associations between adolescents' sexual values and family connectedness ($b= 0.38$; $p= 0.000$) and parent communication ($b= 0.30$; $p= 0.001$), controlling for age and gender. There was a significant improvement in adolescents' understanding of their own sexual values after participation (x-change= 0.20; $p= 0.000$). Associations for both family connectedness and parent communication with adolescents' understanding of sexual values remained significant post-intervention ($b= 0.30$; $p= 0.000$; $b= 0.23$; $p= 0.000$, respectively) though the beta-slope slightly attenuated. Finally, moderation models produced contrasting effects when adjusted for age. Post-intervention, the interaction between family connectedness and adolescents' understanding of sexual values was significant ($b= 0.06$; $p= 0.00$, $r^2= 0.22$). However, the post-intervention parent communication interaction term was not significant ($b= -.14$; $p= 0.10$, $r^2= 0.20$). These findings suggest a stronger effect for family connectedness on adolescents' understanding of sexual values development compared to parent communication, alone.

Conclusions: A healthy sexual self-concept includes understanding both positive and risky aspects of sexuality that are fundamental to informing development of personal sexual values shaped during adolescence. These findings underscore the important protective role parents/families can play in supporting adolescents as they develop understanding of their own sexual values. The role of parents/family communication about sexual values may be especially critical in socially conservative areas of the U.S. where macro-level impacts influence the sexual socialization and sexuality education of adolescents.

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Suicide Risk Among Youth: Roles of Adverse and Positive Childhood Experiences

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Background: Suicide is the second leading cause of death among adolescents in the United States. To prevent suicide, identification of risk and protective factors is urgently needed among preadolescents. A major contributor to suicide risk is exposure to adverse childhood experiences (ACEs), such as abuse, neglect, and other household challenges. There is evidence for a dose-response relationship between total number of ACEs and suicide risk, but less is known about the role of specific ACEs in shaping risk or how Positive Childhood Experiences (PCEs)—protective factors that act as a counterpart to ACEs to buffer stress—affect the relationship between specific ACEs and suicide. Parental criminal involvement as an ACE has received only limited study among children/preadolescents in relation to suicide.

Purpose: The purpose of this study was: a) to investigate whether parental criminal involvement as an ACE was independently associated with suicide risk outcomes (suicidal ideation, suicide attempt), over and above total ACE score among preadolescents; and b) to examine whether positive childhood experiences moderated the association between parental criminal involvement and suicide risk outcomes.

Methods: This study used data from the first two years of the Adolescent Brain Cognitive Development (ABCD) study, a 10-year national study of children ages 9-10 years at baseline. The outcomes were lifetime suicidal ideation and suicide attempts. The exposure was parent criminal involvement (incarceration, arrest, other criminal trouble) that the child perceived as negative. We also measured total ACE count (0-8) and total PCE count (0-8). We used multiple logistic regression models to estimate the odds of suicide risk from parent criminal involvement. Then, we modeled the interaction of parental criminal involvement and PCE count, while controlling for ACEs and other demographic factors.

Results: Suicidal ideation (n=664; 6.5%) was more commonly reported compared to suicide attempts (n=101; 1.1%). Thirty-seven percent of the sample had at least one ACE; 2.8% of the sample (n=282) had three or more ACEs. On average, children had 3.3 (SD=1.5) PCEs. Parent criminal involvement (n=946; 9.3%) was associated with increased odds of suicidal ideation (OR=1.5, 95% CI=1.1–1.9) and suicide attempt (OR=1.8, 95% CI= 1.1–3.1). PCEs significantly moderated the association between parental criminal involvement and suicidal ideation; among children whose parents were criminally involved, those with more PCEs had reduced odds of suicidal ideation (OR=1.2, 95% CI= 1.01–1.4) but not suicide attempts. In both models, PCEs were independently associated with reduced risk for suicidal ideation and attempts.

Implications: This study contributes to growing evidence that parental criminal involvement negatively impacts child mental health, but PCEs can buffer the risk for suicidal ideation associated with parental criminal involvement. To reduce suicide risk across childhood, adolescence, and beyond, we suggest interventions that foster and promote the development of PCEs in early childhood. While PCEs are powerful protective factors, they do not replace the need for professional mental health services for more severe concerns, such as suicide attempts, nor do they negate the need for policy-level action to reduce the overall rates of parental criminal involvement in the US.

The Use of within Person Research Methods Among Adolescents at Risk for Suicide

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Background: In 2019, nearly 20% of U.S. teens reported having seriously considered suicide and rates since the pandemic are likely rising. In 2020 mental health related emergency department visits among adolescents increased 31%, causing organizations, like the American Academy of Pediatrics, to declare a National State of Emergency in Adolescent Mental Health. Despite its clinical significance, science continues to lack an etiological understanding of adolescent suicidal thought, resulting in a dearth of evidence from which to develop treatments and risk assessment strategies. As a result, providers are forced to make clinical decisions without a base of evidence to guide them. Results from a nascent body of literature using within person research methods assisted by innovative technology suggest promising steps forward in suicide theory development. The clinical relevance of these methods, however, has not yet been explored.

Purpose: We tested the utility of intensive longitudinal research methods to identify clinically relevant information about suicidal thoughts in a sample of adolescents at risk for suicide.

Methods: Participants answered brief virtual surveys sent via text message nine times daily for two weeks. Each survey asked about four suicidal thought characteristics (e.g., desire to die) and seven potential risk factors (e.g., hopelessness). Participant responses were monitored twice daily for safety concerns and all participants were required to continue regular mental health treatment while enrolled in the study. We used a within person approach to data analysis by computing intraindividual item means, item variability statistics, time-of-day effects on SI using a one-way Analysis of Variance, and time-series network models using unified structural equation modeling (uSEM). R analytics, an open-source software, was used to compute statistics and visualize data.

Results: A diverse group of ten adolescents, ranging from 13 to 19 years of age, completed 1,054 surveys resulting in 11,594 individual data points. Statistical findings and associated data visualizations highlighted unique patterns of SI variability over time for each participant. Additionally, results showed unique relationship patterns over time between characteristics of suicidal thought and risk factor items for each participant. Intraindividual network analyses indicated which suicidal thought characteristics (e.g., controllability or intent) or risk factors (e.g., anger or loneliness) had the greatest impact on the individual’s symptom experience, suggesting the presence of individualized clinical targets for intervention and risk assessment.

Conclusion: Our findings show that intensive longitudinal research methods generate personalized, clinically relevant, and otherwise unknown, information about adolescents’ experience with suicidal thoughts. Further research is needed to confirm the feasibility and utility of this novel technological approach among larger samples. However, results from this study indicate that an intensive, personalized approach to studying suicidal thoughts in teens is a promising step toward addressing the mental health needs of young people.

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Exploring Predictors of Resilience in Pediatric Nurses

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Aims: This study aimed to explore associations between years of nursing experience, work-related committee involvement, and employment status and resilience scores among pediatric nurses.
Background: High turnover rates, burnout, and distress among nurses have underscored the need to determine how best to support their resilience. Resilience, defined by the APA as the process and outcome of successfully adapting to challenging life experiences, is strengthened by previous experiences overcoming challenges through improved self-efficacy, re-appraisal of later stressors, and more effective coping skills. With nurses, however, it is unclear if hardships related to nurses' work benefit pediatric nurses' resilience, as researchers over the past decade have reached contradictory conclusions, and few have included pediatric nurses. Furthermore, characteristics of a nurse's work and work environment, such as increased recovery time by working fewer hours each week or access to problem-solving through work-related committees, may also influence resilience. Exploring these relationships will assist in identifying the populations most at-risk and inform the development of supportive workplaces.
Methods: A secondary analysis of cross-sectional survey data was conducted using data provided by pediatric nurses working at a Magnet-accredited pediatric hospital between October 2017 and July 2018. Participants were recruited through meeting announcements and email invitations, and completed a demographic survey and the 25-item Connor-Davidson Resilience Scale (CD-RISC). Descriptive statistics and multiple linear regression analyses were attained using R.
Assessment of Findings: A total of 127 nurses participated in the study. However, fifteen respondents had missing data and were removed using listwise deletion, leaving a sample of 112 for analysis, evenly distributed across categories of years of nursing experience, work-related committee involvement, and employment status. The mean CD-RISC score for the overall sample was 74.62 (sd=10.91) out of 100. Years of experience, work-related committee involvement, and employment status explained 3.3% of the variance in CD-RISC total score (adjusted R^2= -0.03, p = 0.98). Years of experience (β = -0.02, *CI*:-2.9, 2.9, *p*:0.99), *part*-time employment status (β = -0.35, 95% *CI*: -4.6, 3.9, *p*=0.88), and committee involvement (β = 0.75, *CI*: -3.5, 5.0, *p*=0.73) did not significantly predict resilience. However, in post-hoc analyses, the range of CD-RISC scores increased with years of nursing experience (p = 0.33). Implications: Although a nurse's resilience may be bolstered by years of experience, committee involvement, or part-time employment status, these characteristics only represent one part of their resilience. None of these factors alone can predict resilience in nurses. The increased range of CD-RISC scores found in nurses with more years of experience suggests that the challenges experienced in nursing may have a positive or negative effect on resilience depending on the perceived outcome. Nurses repeatedly experiencing a lack of recovery or growth from their challenges may become less resilient in the same manner that overcoming challenges bolsters resilience. Our findings in context with the literature suggest that more longitudinal study of resilience in nurses is needed to understand these relationships.

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Intake Differences between Nurses by Shift Condition and Work Status

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Purpose: To determine relationships between working condition, shift, and macro/micronutrient intake during COVID-19 among acute care Registered Nurses (RNs) working full-time, 12-hour shifts.

Background: Shift work is essential for maintaining around-the-clock care in hospital settings. Yet, RNs working night shift experience disrupted sleep patterns and higher risk for diet-related illnesses such as Type 2 Diabetes. Additionally, RNs in acute care positions reported increased stress during COVID-19 related surge. Stress has been strongly linked to poorer diet quality and excessive macronutrient consumption. Some literature suggests night shift nurses in general follow a poorer diet than day shift nurses. The COVID-19 pandemic presented a unique opportunity to examine relationships between shift condition, working status, and macronutrient intake among acute care RNs during increased stress related to the COVID-19 pandemic.

Methods: Nurses working full-time, 12-hour shifts from ten hospitals across the Western US were recruited from October 2020-2021. Consented study participants entered dietary data into the MyFitnessPal software for seven consecutive days and reported whether each day was on-duty versus off-duty and day or night shift. Reported sodium, saturated fat, and total sugar levels were averaged and compared between conditions: on-duty versus off-duty and day versus night shift. Groups were compared using a series of independent samples t-tests conducted in Excel. A p-value of 0.05 was considered significant and all tests were one-tailed.

Results: A total of 24 night shift nurses and 28 day shift nurses had data available for analysis. When comparing macro/micronutrient intake between all participants, no significant differences in average consumption were observed between RNs when on-duty versus off-duty ($p>0.05$) or when working day versus night shift ($p>0.05$). When stratifying work condition by shift type, a few significant differences emerged. When off-duty, day shift nurses reported significantly more sodium intake on average ($m=2.36$ g) compared to night shift nurses ($m=1.99$ g, $p=0.02$) and significantly more saturated fat intake ($m=23.97$ g, $m=20.50$, respectively; $p=0.04$). However, when on-duty, night shift nurses reported more sodium intake on average ($m=2.35$ g) compared to day shift nurses ($m=1.97$; $p=0.03$).

Implications and Further Research: Our study supported that nurses may consume sodium and saturated fat differently when on-duty versus off-duty, particularly when working day compared to night shift. Nurse leaders may support the health of night shift workers by ensuring healthy food options that are low in sodium are available to consume while at work, especially during times of increased occupational stressors such as the COVID-19 pandemic. Nurses may benefit from the knowledge that higher saturated fat and sodium intake were noted among day shift RNs when off-duty compared to on-duty days to help inform healthier eating choices when not at work. Future research is warranted to describe more completely nursing dietary habits and to offer resources for healthy eating regardless of shift type or work condition to prevent diet-related illnesses.

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Habitual Sleep Duration and Health-Related Quality of Life Among US Family Caregivers

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Purpose: This study examined the associations between habitual sleep duration and health-related quality of life (HRQOL) measures in family caregivers.

Background: Family caregivers are at high risk for negative health outcomes including poor sleep quality, insufficient sleep, and poor HRQOL. Previous studies with family caregivers have shown significant associations between sleep quality and HRQOL. However, there is a paucity of data on the relationship between habitual sleep duration and HRQOL among family caregivers.

Methods: This cross-sectional study used data from 23,321 family caregivers in the 2016 Behavioral Risk Factor Surveillance System. A family caregiver was defined as a person who provided care or assistance to a friend or family member with a health problem, long-term illness, or disability. Habitual sleep duration was self-reported as the average number of hours of sleep in a 24-hour period. The HRQOL measures were general health status, number of poor mental health days (mental HRQOL) and poor physical health days (physical HRQOL) in the previous 30 days. A multivariable logistic regression model was used to examine the association between habitual sleep duration (<7, 7 - 9 [reference], >9 hours) and general health status (fair or poor versus good to excellent). Zero-inflated negative binomial models were used to analyze the association of habitual sleep duration with poor mental health days and poor physical health days. These models controlled for: caregiver characteristics (age, sex, marital status, race/ethnicity, education level, employment status, number of chronic health conditions, history of depression, leisure time physical activity, smoking status, alcohol intake), caregiving characteristics (relationship of the care recipient to the caregiver, caregiving duration, caregiving hours per week, unmet support service needs), and the care recipient's primary health condition.

Results: Family caregivers with short sleep duration (<7 hours/day) were more likely to report fair or poor health (odds ratio [OR], 1.40; 95% CI: 1.12, 1.74) compared to caregivers with normal sleep duration (7 – 9 hours/day). Caregivers with long sleep duration (>9 hour/day) were twice more likely to report fair or poor health (OR, 2.07; 95% CI: 1.34, 3.21). Caregivers with short sleep duration had a higher number of poor mental days (RR [risk ratio], 1.17; 95% CI: 1.04, 1.31) and poor physical health days (RR, 1.26; 95% CI: 1.10, 1.45) when compared to those with normal sleep duration. Those with long sleep duration had a higher number of poor mental health days (RR, 1.31; 95% CI: 1.08, 1.60). There was no significant association between long sleep duration and the number of poor physical health days.

Conclusion: These results indicate an independent association between extremes in habitual sleep duration and lower HRQOL measures. This is important because habitual sleep duration as a health behavior can be modified to achieve better health outcomes including HRQOL. These findings point to the need to promote adequate habitual sleep duration and address factors underlying extremes in sleep duration as part of interventions for supporting family caregivers' health and wellbeing. Future longitudinal studies are recommended to examine how habitual sleep predicts changes in HRQOL among family caregivers.

Chaplains and Hospital Staff Stressors: A Qualitative Research Framework

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Purpose: To describe the development of a theoretical framework to study the process of how hospital staff may use chaplains to relieve professional and personal emotional stressors.
Description of Theory: Two acute care nurses, two experienced nurse researchers, a hospital-based chaplain, and two Pharmacist faculty partnered to explore ways that hospital staff, and especially nurses, may relieve stress after experiencing emotional turmoil such as patients dying alone during the COVID-19 pandemic. The team hypothesized that staff interactions with hospital-based chaplains may serve to alleviate stress and burnout. The team, led by the qualitative research expert, first conducted a literature review on the phenomenon of stress management and selected the Transactional Model of Stress and Coping to inform the research question. According to this theory, stress is contextual and can change over time based on an individual's coping mechanisms and personal appraisal of the situation. Using this lens, the study team developed a conceptual model hypothesizing that chaplains offer a mitigating effect on clinical caregivers' stress experience.
Logic Linking Theory to Practice: The team met virtually over three sessions and used the Transactional Model of Stress and Coping to build a framework and answer the research question: "Among hospital-based healthcare staff during the COVID-19 pandemic, what are the experiences of interacting with chaplains to alleviate emotional stress and burnout?" The study team adhered to the consolidated criteria for reporting qualitative research (COREQ) guidelines while creating the framework and reached a consensus on the proposed theoretical model during the final meeting. The team then used the model to create an *a priori* coding manual to guide formation of semi-structured interview questions and support a rigorous qualitative descriptive analysis. A total of 29 interviews were conducted, and the framework and coding manual were utilized to conduct thorough and systematic testing of the hypothesized relationships between healthcare staff perceived stressors and decisions to interact with chaplains. Analysis of subsequent participant transcripts using the framework confirmed the hypothesized major themes describing the process of how staff make the decision to use chaplains to cope with stress: Experiencing the Stressor, Appraising the Situation, Generating Emotions, Securing Coping Resources, and Evaluating Outcomes. Most participants recounted positive encounters with the chaplains to mitigate professional, personal, and spiritual sources of stress and burnout.
Conclusion: A sound qualitative methodological approach facilitated the creation of an applicable theoretical framework to describe how hospital staff, and in particular, nurses, may use chaplains to relieve stress. As clinical caregivers continue to cope with after-effects of the extraordinary stressors of the pandemic, the impact of hospital chaplains – a resource already embedded in most hospitals – on caregiver stress and emotional well-being is of critical importance.

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Nurse Professional Quality of Life and Chaplain Interactions

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Purpose: To explore relationships between professional quality of life and frequency of chaplain-nurse interactions.

Background: Acute care nurses may report work-related stress and experience negative emotional consequences. One construct measuring emotional states is the Professional Quality of Life Scale (ProQOL), comprised of compassion satisfaction (CS), burnout (BO), and secondary traumatic stress (STS). CS describes personal fulfillment in work-related activities. BO denotes perceptions of intense, prolonged work stress and accompanying emotional exhaustion. STS describes feeling traumatized by bearing witness to another's traumatic event. Both BO and STS negatively impact outcomes such as nursing job satisfaction, attendance, intent to stay, and delivery of safe patient care. Caregivers with higher levels of spirituality may report lower BO and higher CS. Chaplains employed in hospital settings provide spiritual support services, particularly during end-of-life care situations, yet relationships between frequency of interactions between nurses and chaplains and levels of professional quality of life are unclear.

Methods: A secondary analysis of a cross-sectional survey study that took place in a large, nonprofit, Catholic health enterprise was conducted. Registered nurse participants were included in the analysis. Variables analyzed for this study included responses to the valid and reliable ProQOL questionnaire-V5 and demographics (years of experience, specialty area, hospital bed size, religious affiliation, perception that a chaplain is present and available in current work setting). Frequency of interactions with chaplains in the past 12 months was measured by asking: "How frequently have you interacted with a chaplain to discuss stress related: to 1) patient care (i.e., distressed patients or relatives; agitated patients; dying patients); 2) work stress related to institutional or team issues (i.e., scheduling; team communication issues; staffing; etc.); 3) personal stress related to issues outside of work (i.e., illness of self or loved one; conflict at home; etc.)". Descriptive and frequency statistics were conducted to describe the sample, and Pearson's correlation coefficients were tabulated to test relationships between ProQOL subscales and frequency items.

Assessment of Findings: A total of 741 Registered Nurses had data available for analysis (reported a chaplain was present and available and provided complete answers to all variables of interest). In the sample, a significant correlation was observed between an increased frequency of interactions with chaplains regarding patient care events in the past 12 months and higher burnout (r=0.11) and secondary traumatic stress (r=0.18) but not compassion satisfaction (r=0.00). Furthermore, reporting more frequently interacting with chaplains in the past 12 months to discuss work-related stressful issues (institutional or team issues) and home-related stressors (personal or family illness etc.) was correlated with higher levels of STS (r=0.19, r=0.13, respectively), but not BO or CS.

Conclusion and Implications: This study demonstrated nurses with higher levels of BO and STS but not CS may more frequently interact with hospital chaplains, indicating nurses may be appropriately consulting with chaplains to manage stressors. It is unclear whether the absence of chaplains would impact BO or STS for nurses. Future research should explore the role of chaplains in supporting nursing professional quality of life.

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The Impact of Spiritual and Religious Beliefs on the Professional Well-Being of Nurses

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Purpose and Aim: The aim of this quantitative descriptive study was to examine nursing students, nurses and nurse educators holistically: spiritually, mentally, and physically.

Rationale and Background: Research has examined nursing students', nurses' and nurse educators' level of burnout, resilience, compassion satisfaction, compassion fatigue and secondary trauma. Rothacker-Peyton, et al. (2022) noted that nurse educators were experiencing secondary trauma, burnout, and compassion fatigue before COVID-19. Drach-Zahavy, et al. (2021) noted that nursing students' coping strategies are built on social support of family and colleagues. However, little has been examined regarding nursing students', nurses' and nurse educators' spirituality and religious beliefs and the relationship of these beliefs to anxiety, burnout, resilience, compassion satisfaction, compassion fatigue and secondary trauma levels during the COVID Pandemic.

Methods: Following IRB approval, in the Spring of 2022, participants were recruited from a faith-based university in the Pacific Northwest including: nursing students, nursing faculty and alumni. Current nursing students and faculty were sent an email explaining the purpose of the research and asked if they would be willing to participate. A link to the *Survey Monkey* tool was provided with a consent form outlining the specifics of the research study. Completion of the survey tools: General Anxiety Disorder-7 (GAD-7), Connor-Davidson Resilience Scale-10, Daily Spiritual Experience Scale and Professional Quality of Life Scale. Completion of the survey signified implied consent. Alumni were provided the same link to the *Survey Monkey* tool via the electronic nursing alumni newsletter.

Findings: n=83, nursing students = 34, nurse educators=11, nurses= 38 with a final n = 79, participants completing the study tools. Participants who described themselves as being anxious were found to have a statistically significant high positive correlation score with their GAD-7 scores (r = .727**). There was a negative moderate statistically significant correlation of participants who described themselves as anxious and their resilience scores (r = -.502**). Further, participants who viewed themselves as religious had a positive moderate statistically significant correlation to their Daily Spiritual Experience (r = .681**) and those who reported being spiritual had a statistically significant moderate positive correlation to their Daily Spiritual Experience (r = .622**). Also, participant's Daily Spiritual Experience was found to have a statistically significant minimal positive correlation with resilience and compassion satisfaction (r = .298**; r = .293**), respectfully. Additionally, Daily Spiritual Experience reflected a minimal negative statistical significance (r = -.238*). Finally, participants experienced a statistical positive high correlation of burnout and secondary trauma (r = .801**). (* Correlation is significant at the 0.05 level [2-tailed]. ** Correlation is significant at the 0.01 level [2-tailed]).

Conclusion: Data supports that nursing students, nurses and nurse educators in this research study did experience high levels of anxiety during the COVID 19 pandemic. Qualitative interviews will be implemented Spring 2023 with participants of this study to gain insights regarding specific strategies they used to address anxiety, nursing burnout, secondary trauma and strengthening of daily spiritual experiences.

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The Role of Social Support in HIV Stigma and Perceived Stress in Burmese Living with HIV

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Aims: By examining the interacting relationships among HIV stigma, social support, and perceived stress, this study aims to demonstrate the role of social support in reducing the HIV stigma and perceived stress.

Background: Stigma has heavily impacted People Living with HIV (PLWH). In Myanmar, due to this highly stigmatized disease, 60% of PLWH felt ashamed due to their sero-status, and many of them failed to seek health services due to the anticipated stigma. Social support refers to the assistance and protection given by others, such as families, friends and the society. The stress-buffering model proposes that social support provides PLWH with physical and/or psychological resources to appraise stressful situations in less negative ways and thereby helps PLWH manage stressful situations, such as HIV stigma in a more positive way. Currently, few studies have explored the effect of social support between HIV stigma and perceived stress among PLWH in Myanmar, though one study has shown that when PLWH face challenges in life, they usually seek out social supports.

Methods: During first seven months of 2020, a random sample of 248 eligible PLWH were contacted from a private closed Facebook group with more than 18,000 Myanmar people, where 90% of the members were PLWH. One hundred and nighty-four consented participants were enrolled in the study. Variables collected included demographics data, perceived stress, social support, and HIV stigma. The bootstrap method was used to test multiple mediation analyses and repeated 5,000 times.

Findings: After controlling for the effects of demographic variables, the path from perceived HIV stigma to perceived stress is significant (direct effect β=0.24). In a parallel model, the indirect effect of social support was 0.04, which accounted for 67.63% of the total indirect effect (0.059) and 16.63% of the direct effect (0.24) in the relationship between HIV stigma and perceived stress. This result shows that HIV stigma can positively influence perceived stress leading to increase in perceived stress. In addition, PLWH with higher levels of HIV stigma presented with lower levels of social support. However, there was no significant mediation between HIV stigma and perceived stress among our sample of PLWH from Myanmar.

Conclusions: This exploratory study shows that social support did not have the expected effect of decreasing perceived stress in PLWH in Myanmar. As a resource-limited country where social support policy is lacking, PLWH experienced worse HIV stigma when compared to countries with well-trained staff to assist those coping with HIV and thus decrease their perceived stress. Interventions to reduce HIV stigma to decrease perceived stress should consider other strategies, e.g., spirituality-based practice, to reduce perceived stress in Myanmar PLWH.

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Psychosocial Factors Influencing Betel Nut Chewing in People Living with HIV in Myanmar

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Aim: The purpose of this study was to identify psychosocial factors that influence betel nut chewing behavior in people living with HIV (PLWH) in Myanmar.

Background: The betel nut is a seed of the areca palm, known as the areca nut. Approximately 600 million people consume betel nuts globally, with Southeast Asian countries such as Myanmar being one of the largest consumers of betel nuts. The betel nut has an addictive stimulant effect and adding nicotine to the nut and chewing betel nut is socially and culturally influenced in Myanmar. However, the betel nut is listed as a Group 1 carcinogen by the International Agency for Research on Cancer. Many studies have shown a strong link between betel nut chewing and oral and oropharyngeal cancers. For example, a meta-analysis study concluded betel nut users have increased risk of oral/oropharyngeal cancers (RR >1.0) compared to non-betel net users. In addition, people who have betel nut chewing behaviors are 2.6 times more likely to report a HIV diagnosis or are at greater risk of mental health disorders such as anxiety and depression.

Methods: A secondary analysis of data collected from January to July 2020 in Myanmar from 172 participants living with HIV was undertaken. Subjects were recruited from a private Facebook group for PLWH and inclusion criteria were those 18 years old or older, confirmed HIV diagnosis, and currently residing in Myanmar. People who were not diagnosed with HIV were excluded. Ordered logistic regression was performed. All independent variable measures used in the study, including physiological hyperarousal symptoms, anxiety, HIV stigma, and loneliness, have established high internal consistency for reliability. Hyperarousal symptoms were defined as experiencing physiological symptoms, difficulty concentrating, and difficulty sleeping due to stressful events.

Results: A total of 172 PLWH ranging in age from 18 to 55 years old (*M*=35.99; *SD*=8.80) were included in the sample and 61% were males and 43% reported being married. Although 89% reported that they were currently on HIV medications, 8.2% reported never being on HIV medications. Twenty-four percent of PLWH reported ever using betel nuts. Among those betel nut users, 12% reported using betel nut weekly or almost daily in the last three months. Comparing the higher frequency of betel nut use with non-betel nut users, the influencing factors for use were physiological hyperarousal symptoms (*OR*=1.72; *95%CI*=1.03-2.87) and loneliness (*OR*=2.31; *95%CI*=1.06-5.02). HIV stigma and anxiety were not significant influencing factors. After controlling for sex, both physiological hyperarousal symptoms (*OR*=1.72; *95%CI*=1.01-2.91) and loneliness (*OR*=2.31;*95%CI*=1.05-5.07) remained significant.

Conclusion: PLWH face many stressful events related to their HIV diagnosis in daily life with their physiological reactions manifesting as physical symptoms including shortness of breath, chest pain, or abdominal distress. In this study, physiological hyperarousal symptoms were associated with increased betel nut chewing behavior among PLWH. Increasing betel nut use increases the risk of betel nut dependence and the development of oral and oropharyngeal cancers. Future research should include awareness of cancer risk and prevention of betel nut use in PLWH in Myanmar.

Factors Influencing Mental Health Among Low-Income Women in Vellore, India

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Purpose: To explore low-income urban women's mental health in India's rapidly changing society.
Background: Globalization and urbanization have produced both benefits and risks for India's population. The positive effects include economic growth and a promise of a better life for the middle-class as well as for some lower income populations. With these changes, Indian women flocking to India's cities are experiencing significant changes in terms of work expectations, family life, and environment. The negative effects of globalization and urbanization include expansion of slums, and negative effects on physical and mental health, due to decreased community support, security and increased isolation. Furthermore, race, class, and gender (intersectional tensions) continue to influence women's health as do common social determinants of health. Understanding these complex factors, especially for low income women, is critical to understanding women's health and disparities in the Indian context.
Methods: We conducted a mixed-methods sequential explanatory study with 286 women in low-income communities of Vellore, a medium-sized city in South India. All study materials were forward and back translated. Phase 1 involved audio recorded key-informant interviews and focus groups (*n* = 25) which were transcribed verbatim, translated into English, inductively coded, and analyzed for emerging themes. Phase 2 (*n* = 261) entailed conducting structured interviews [due to low literacy and/or research naiveté of participants] quantitative data, including demographics, health history, and validated scales designed to measure mental health symptoms, coping strategies, social support, living situation, and life satisfaction. Interviews were conducted by gender and language matched, research trained, community health nurses.
Findings: Qualitative themes: 1) benefits of living in the city, 2) double duty for women as they must complete not only the household work but paid work as well, 3) challenges of living in the urban environment, 4) advantages of living in the village, 5) struggles associated with village life. Quantitative results include an average Hopkins Symptoms Checklist (HSCL) score of 1.82 (*SD* = 0.70) which exceeded the 1.65 cut-off score for anxiety and depression symptomology suggested for similar populations, and nearly meeting the original cut-off score of 1.85. Among participants whose individual scores exceeded the 1.65 cut-off (*n* = 129) the average was markedly elevated (*M* = 2.39, *SD* = 0.56), well above either cut-off score. These women were similar to the other participants on demographics, but were significantly more likely to rely on wishful thinking, religious coping, experience post-migration living difficulties, less social support, and have less satisfaction with life, Cohen's *d* = .50 – .94. Regression analysis exploring these variables' association with HSCL in the high scoring women explained 34% of the variance, with post-migration living difficulties remaining a significant predictor.
Conclusion: Given the critical role of post-migration living on depression and anxiety in low-income urban-dwelling women, and the limited mental health workforce and cultural stigmatization of mental health issues, we recommend that a community-based, self-help program be developed. The program should promote factors found to positively influence mental health in this population, namely effective personal coping strategies, autonomy, and social support.

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Transactional Sex Among Adolescents in Botswana: Context and the Role of Families

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Purpose: Intergenerational transactional sex (TS), adult-initiated sexual encounters with adolescents in exchange for providing material goods, has been consistently identified as a key determinant of HIV acquisition by adolescents. Following the onset of the COVID pandemic, rates of TS tripled from 13.6% to 38.1% among adolescents in Botswana, the country with the third highest global HIV rate. Fueled by economic instability, TS may worsen during the ongoing global recession. There is an acute need to develop effective interventions to address this concerning shift and to protect the health of adolescents. To identify potential interventions to reduce the magnified HIV and sexual risks associated with transactional sex, the purpose of this abstract is to quantify who engages in transactional sex and to assess the difference in family functioning, attitudes, and beliefs between sexually active adolescents engaging in TS and sexually active adolescents not engaging in TS in Botswana.

Approach: We recruited 557 adolescents who were 13-18 years old using household-based sampling across residential districts (blocks) in and around Gaborone, Botswana from June 2019 to October 2022 for participation in a longitudinal study. Participants completed surveys on laptop computers at a private, central location. Participants reported their demographic characteristics and sexual behaviors, and completed validated theoretically relevant measures. For this analysis, we limited the sample to baseline data from sexually active adolescents. We calculated proportions, means, and standard deviations to describe the sample, followed by t, chi-squared, and Fisher's exact tests to compare data from sexually active adolescents who reported engaging in TS with those who did not.

Outcomes: The sample of sexually active youths included 55 boys and 46 girls, and their average age was 16.2 years. Two-thirds (69.6%) of the sample was in school. The mean age of first sex was 14.3 years and 22.5% of the sexually active youths reported engaging in TS in the last two months. Relative to sexually active adolescents who did not engage in TS, adolescents who engaged in TS were significantly more likely to report having a sexually transmitted infection (38.1% vs. 10.3%, p<.01) and HIV (40.0% vs. 5.4%, p<.05). They reported a poorer relationship with their parents (p<.05) and perceived their parents as less comfortable responding to their questions about sexuality and sexual development (p<.001). A greater proportion of adolescents who engaged in TS reported sex while using alcohol (p<.001), cocaine (p<.01), or ecstasy (p<.01). Adolescents who engaged in TS had less HIV knowledge (p<.05), more negative attitudes toward condom use (p<.01), perceived greater barriers to condom use (p<.01), more acceptance of transactional sex (p<.001), and lower beliefs in their self-efficacy in handling risky sexual situations (p<.05) compared to adolescents who did not engage in TS. There were no differences in gender, age, education, and household composition.

Conclusions: Adolescents who engage in TS have significantly different health outcomes, attitudes, beliefs, and family functioning compared to their sexually active peers. These data provide potential leverage points for interventions to reduce TS and multilevel interventions that involve parents as well as adolescents are needed.

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Impact of Mother-Daughter Sexual Communication on Young Asian Women's Sexual Behavior

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Aim: This study explored how Asian American young women's recall of their mother's parenting style and sexual communication during adolescence, and their level of acculturation relates to their sexual behavior.

Background: Despite overall decline in HIV incidence in Unites States, Asian Americans are the only racial group with increasing seroconversion rates. In 2018, 2% of Asian Americans were diagnosed with HIV although they made up only 6% of the total of U.S. population. Asian Americans also had the highest rate of concurrent AIDS diagnosis (35%) compared to Black (20%) and Hispanic (17%). Parenting style and open mother-daughter sexual communication are protective factors in supporting daughters' resilience against sexual risk behaviors. However, in Asian Americans culture discussing sexual health topics are taboo. Asian Americans mothers and daughters have diverse cultural beliefs about sexual health possibly due to different acculturation levels.

Conceptual Framework: The Calgary Family Systems Model was the framework for the study, with family members' beliefs as the primary concept.

Method: This was an exploratory, cross-sectional study. Qualtrics Panel were utilized to recruit the sample, consisting of East or Southeast Asian Americans young women between the ages of 18-36 years, who had lived with their mothers of Asian descent in the United States during adolescence. Major concepts included parenting style, mother-daughter sexual communication, acculturation, and sexual risk behavior all with established reliability and validity.

Results: The sample consisted of 208 Asian Americans young females (*M*=25.7 years, *SD*=5.6), 39% reported never having been sexually active and 37% reported low sexual risk behavior. The 126 sexually active Asian Americans young women reported their mean age of sexual initiation at 18.5 years (*SD*=3.4). Forty-six percent of women reported never having talk with her mother about sex. Of those who reported having sexual communication, 30% described abstinence as the most frequent topic. The sexual risk outcome variable was categorized into four risk-severity groups. The women in the highest risk group reported that their median age of first sexual communication was at age 15 (*IQR*=3) compared to the no risk group having their first sexual talk with mother at age 20 years (*IQR*=11). Although independent variables were positively correlated with each other, no significant differences were found between sexual risk groups and the independent variables.

Conclusion: Findings were divergent from previous studies with minoritized populations regarding mother-daughter sexual communication and sexual risk. A qualitative study is needed to better understand the timing and context of mother-daughter sexual communication among Asian Americans families. In as much as these Asian Americans young women reported older age of sexual initiation compared other minoritized populations further exploration of how sexual risk is measured should be undertaken.

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CARING FOR GLOBAL POPULATIONS

Factors Associated with Immediate Postnatal Care in Lao People's Democratic Republic

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Purpose: This study aimed to identify potential factors associated with immediate postnatal care in Laotian women.

Background: The World Health Organization recognizes that approximately half of all maternal deaths occur in the immediate postnatal period or 24 hours after birth. One crucial step to improving maternal mortality is a postnatal check during the first 24 hours following birth. Forty-seven percent of Lao women aged 15-49 who delivered a baby in the last two years received a postnatal health check in the first two days after delivery. Of these, 46.5% of postnatal checks were conducted prior to discharge from the facility or before the provider left the home. After leaving the presence of a provider, 98.5% of these women never received another postnatal check. The conceptual framework underpinning the selection of factors included in this study draws from The Behavioral Model of Health Services Use. The study's predisposing, enabling, and need variables are based on previous research and the conceptual model. Identifying factors associated with Laotian women who do not receive immediate postnatal care (PNC) will allow health officials to develop targeted interventions to decrease maternal mortality.

Methods: A secondary data analysis of the Lao PDR MICS 2017 data set was completed to identify factors associated with immediate PNC. Immediate postnatal care is defined as the care provided in the first 24 hours from birth. Participants were eligible if they were women between the ages of 15-49 who had a live birth two years before the study. Participants were excluded if they had a stillbirth or miscarriage. Pearson's chi-square identified differences in factors associated with women receiving immediate PNC. Univariate and multivariate analyses identified factors associated with immediate PNC utilization.

Results: The sample included 4,460 participants, 2,451 (55.2%) did not receive immediate PNC, while 1,999 (44.8%) did receive immediate postnatal care. Among the predisposing and enabling factors, age, head of household education, religion, region, media exposure, and wealth were associated with decreased immediate PNC utilization. Need factors, including parity, delivery location, and delivery assistant, identified target populations for intervention. Women with four or more births were less likely to receive immediate PNC than a first birth (OR=0.58, 95% CI [0.42-0.79]). Women delivering in a government health center were less likely to receive immediate PNC than those delivering in a private facility (OR= 0.14, 95% CI [0.04-0.47]). Women delivering with a nonskilled attendant (OR=0.33, 95% CI 0[.22-0.51]) were less likely to receive immediate PNC than those delivering with a doctor.

Implications: Identified populations from this study should be the foundation for targeted interventions to improve immediate postnatal care in Lao PDR. Multiparous women must be a target population for intervention to obtain a higher rate of immediate PNC, secondarily decreasing the likelihood of postpartum hemorrhage and infection. The Lao PDR government must increase the number of providers providing immediate PNC in government health centers and hospitals. This intervention will increase facility births and skilled birth attendance two-fold. This data supports these targeted interventions for decreasing maternal mortality and morbidity in Lao PDR.

CHILD HEALTH / ILLNESS

Mindfulness App Feasibility in Parents of a Child with Chronic Illness: A Pilot Study

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Purposes/Aim: The purpose of this pilot study is to provide preliminary data on the feasibility, and acceptability of mindfulness app use in parents of a child with medical complexity (CMC).

Background: Medical advances in the last half-century created a dramatic change in the prevalence of childhood-onset diseases. The estimated prevalence of children with medical complexity (CMC) ranges from 1% to 5% or approximately 680,000 children depending on the definition. These parents experience worse mental and physical health outcomes compared to parents of healthy children. It is well documented that these parents experience high levels of stress and depression. Over 60% of parents of a child with chronic illness experience depression compared to 10% in mothers of healthy newborns. Mobile applications (apps) for smartphones present an opportunity to overcome barriers associated with typical mindfulness meditation programs. Research evidence supports the feasibility, acceptability and usability of mindfulness apps in students and parents of children with chronic pain, however, to our knowledge, there is no research examining the use of a mindfulness app in parents of a CMC.

Methods: Parents were recruited through a local non-profit organization aimed at supporting parents of medically fragile children. Parents were emailed a link to more detailed information about the study, the consent, and baseline questionnaire. After completing the baseline questionnaire, parents were sent instructions on how to download the mindfulness app, Smiling Minds, and reminded to use it for at least 10 minutes for 4 times a week. Parents answered a weekly questionnaire that included eight feasibility and acceptability questions. The final questionnaire consisted of 9 feasibility and acceptability questions.

Findings: Twelve parents agreed to participate in the study and filled out the baseline questionnaire and eight parents completed the 4 week study. Overall, parents used the apps 3.4 days/week (SD = 1.4, mdn = 3) and the majority of parents used it for more than 10 minutes/week (n = 6). Parents found the mindfulness exercises either easy (n = 6) or very easy (n = 2) to complete and enjoyable (n = 4) or very enjoyable (n = 2), while two parents reported the exercises not very enjoyable. At the end of the 4 weeks, the net promoter score was 38.

Conclusions/Implications: Overall, the majority of parents were able to use the app consistently through the week. This pilot study provides preliminary information about the feasibility and acceptability of a mindfulness app in this population. Future research aimed at describing the health benefits of a mindfulness app are needed; however, this study provides the first step in describing whether a mindfulness app is useful in this population. This may provide pediatric nurses and providers with a simple intervention to suggest to parents who are struggling with stress and depression.

Restricted NICU Visitation: Influence on Parental Language, Noise Level, & Biometrics

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Purpose/Aim: Determine the impact of restricted parental visitation during COVID-19 on the quantity of speech input available to hospitalized low birth-weight (LBW) preterm infants (24-32 weeks gestation). We hypothesized this decrease in parental verbal engagement would impact preterm infants' stress response, and limit access to speech input necessary for the healthy development of cognitive pathways.

Rationale/Background: Preterm infants born at LBW are at risk for adverse language outcomes including developmental deficits such as memory issues, language processing, and/or speech delays. The human auditory system is functional at ~ 25 weeks gestation, and the fetus is typically exposed to low-frequency sounds like the human voice. This protective uterine environment promotes the development of healthy cognitive auditory pathways (i.e., memory) in the term infant. In contrast, LBW infants are exposed to damaging high-frequency sounds including alarms and life-saving equipment common in the Neonatal Intensive Care Unit (NICU).

Parental *verbal* engagement has been shown to be protective in the vulnerable LBW population, reducing stress responses. Maternal voice has been associated with short-term physiological and behavioral stabilization, as measured by heart rate, respiratory rate, oxygen saturation, improvements in feeding, and reduced adverse events. Importantly, early experience with speech input predicts later language outcomes, including vocabulary size and language processing skills stressing the importance of *verbal* parental engagement during NICU hospitalization. During the height of COVID-19, visitation in the NICU was reduced from 6+ family members to 1 parent a day.

Methods: We recruited 2 cohorts of preterm infants: one born before the onset of the pandemic (July 2019 through February 2020; N=39) and one born during the pandemic (April 2021 through April 2022; N=40) to describe typical patterns of parental verbal engagement, noise levels, and biometric readings during language input. To capture word count information, the Language ENvironmental Analysis (LENA) was placed inside the infant incubator, recording speech input (word count) over a 16-hour period, which included 8 daytime and 8 nighttime hours. Average noise levels and infant biometrics (HR, RR, and oximetry) were concurrently collected for analysis.

Results: Across both cohorts of infants, there was enormous variability in the quantity of words spoken in the infant's environment (M=2,785, SD=3,483; range: 85-17,885). Infants born during the pandemic were exposed to approximately 20% fewer words (M=2,438, SD=2,579; range: 133-10,158) than infants born before the pandemic (M=2,981, SD=3,920; range: 85-17,885). Comparison of biometric data during high/low language input revealed meaningful patterns. Average noise levels were consistent day and nighttime (M= 52.3dBA; range: 31.7-83.1).

Implications: The variability of language input suggested that some infants may be particularly at risk due to extremely limited language exposure at critical auditory developmental stages. Pre/Post COVID language exposure comparison of 20% fewer words did not reach statistical significance, however compounded over time may prove to have clinical significance. Despite efforts to reduce extraneous noise in the NICU, the average noise levels far exceeded the noise limit guidelines of 45 decibels set by the AAP. Stress reduction during verbal engagement was demonstrated through stabilization of HR/RR and improved oxygen saturation.

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Growing at Home: Influences of an Early NICU Discharge Program on Transition to Home

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Purpose: Describe parent experiences of transition from the neonatal intensive care unit (NICU) to home with the Growing @ Home (G@H) program.

Background: Admission to the NICU is stressful for families, and parents long to bring their baby home from the first day there. The final barrier to an infant's discharge from the NICU is often the inability to take in all required nutrition by mouth, which requires strength, stamina, coordination, and time. The G@H program allows discharge and remote monitoring of otherwise medically stable infants still requiring nasogastric tube (NGT) feeding supplementation. G@H families were taught how to place and maintain an NGT, and were provided with a scale and a tablet into which data related to weight, intake, and output were entered. A NICU physician talked with the family daily to manage feedings, answer questions, and provide support. While discharge from the NICU is often joyful, the transition from hospital to home can be challenging. The influence of the G@H program on the success of this significant transition is unknown.

Methods: A qualitative descriptive approach was taken for this study. Parents of infants in the G@H program were interviewed in a semi-structured format at 3 intervals: pre-discharge, 1-month post-discharge, and 6-months post-discharge. Thematic content analysis was conducted on transcribed interviews. Initial coding and evaluation of themes was completed by 2 study authors; frequent meetings were held to discuss coding reliability, emerging themes, and relation to transitions theory. Basic descriptive data was collected via online survey.

Findings: Parents (N = 17) of infants (N = 11) made the transition to home and graduated from the G@H program by the end of the study. The G@H program affected the families' transition by being: a means of escape, a safety net, and a middle ground. Though there was increased work involved, parents expressed a yearning to "escape" the NICU and viewed the G@H program as the best way of doing so safely. G@H offered a "safety net," feeling connected to the NICU meant that if things weren't going well, they would still have support, and be reassured their baby was safe through continued monitoring. G@H was a "middle ground" between the restrictive but supportive environment of the NICU and the normalcy but isolation of home. This facilitated their transition by offering benefits of professional care (support, guidance, knowledge) while parents gained confidence in their parental role and could feel situated in their home. Contextual factors also influencing families' transition to home were the Covid-19 pandemic, race, being partnered, employment with some parental leave benefit, and social support other than a partner.

Conclusions: Findings are encouraging in their support for this and similar programs as a facilitator during a family's transition from NICU to home. The G@H program is one of only a few like it in the country; while further research will be done regarding infant and family outcomes, institutions should consider the benefits of early discharge remote monitoring programs with clinician support for neonates and families.

Funding: Friends of Doernbecher Foundation (hospital-based organization, no grant number associated)

Digital Media Use in Families with School-Aged Children: A Qualitative Study

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Purpose: To explore and describe digital media's (DM) usage among families with school-aged children.

Background: The increased use of DM in school-aged children has become a significant challenge for many families in our highly digitalized society. According to the American Academy of Pediatrics, the use of DM in children over the last decade, including interactive and social media, has surpassed the recommended amount of time per day in most families. While newer media have benefits and risks, excessive and unmonitored use of DM over time can lead to adverse health effects in children and unhealthy family dynamics.

Design: Qualitative description with thematic analysis was used to describe parent-child dyads' perception of the use of DM in their homes. This methodology was chosen because the current body of literature lacks qualitative studies examining the phenomenon of interest in school-aged children. Semi-structured interview questions guided the interviews while allowing the parent-child dyad to speak freely about the subject matter.

Methods: Using a qualitative descriptive research design, we conducted semi-structured interviews with children between 6-12 years of age and their parents. The dyads were recruited from a pediatric clinic in Riverside County, California until saturation was achieved. Data collected from the interviews were transcribed, coded, and analyzed for themes. The themes that emerged were then categorized.

Results: Ten parent-child dyads participated in the study. Altogether, six major themes emerged: 1) parental involvement in their children's DM use, 2) parenting styles, 3) enforcing academic as a priority, 4) engaging children in after school extra-curricular activities, 5) creative use of electronic devices in the home, and 6) having open communication in the household.

Conclusions/Implications: Our findings identified children's DM use are controlled when parents are closely involved in their DM use, academics are prioritized, after school activities are incorporated into their daily routines, electronic devices are creatively used, and there is open communication about DM in the home. We recommend future studies to utilize quantitative methods to examine associations between the themes identified and school-aged children's DM use.

Keywords: qualitative, dyads, school-aged children, digital media

Childsplay: An Innovative Approach to Fun for Children with Special Healthcare Needs

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Purpose: The purpose of this study was to develop and test a Childsplay arts program for children with developmental disabilities/special healthcare needs and their parents that improves parents and children's social/emotional wellbeing.

Background: Children with special healthcare needs require an overwhelming array of coordinated healthcare, educational, behavioral, social, care services that have a significant physical, emotional, and financial impact on the family unit. To address the need for fun and play, an interdisciplinary team of faculty composed of artists and healthcare professionals collaborated with a local children's theater company to encourage play through re-creating steps to stage a production. Our intervention was designed based on in-person theater productions, thus we had to pivot during COVID-19 pandemic to providing theater experiences in the family home.

Methods: The theater company developed boxes that included elements of theater productions: scenery, costume, sound, and encouraged imaginative play with family members. A series of three boxes were created per family and distributed every 6 weeks. With each distribution, a theater teaching artist would communicate with the family via Zoom to describe how to use the contents and create theater play. Pre and posttests (WHO Wellbeing Index, Perceived Stress Scale, Family Functioning, and Family Apgar) were administered once parents had consented for their children to participate and repeated when the families had completed the intervention. Thirty (30) families received the boxes, but only 14 completed the pre and posttest surveys. The results are based on the 14 responses.

Results: The majority of the parents were over 35 and had 2 children. Their quality of life score significantly improved (78 pre to 88 posttest ($p <.01$), their perceived stress was unchanged (21.3 pre to 21.4 posttest), the family APGAR was unchanged (13.2 pre and 13.2 posttest) and their wellbeing improved (13 pre to 14.4 posttest. $P<.11$), but not significantly.

Conclusion/Implications: Helping parents and other siblings enjoy playing with the child with special healthcare needs significantly improved the parents' quality of life and to a lesser extent, their wellbeing. It did not show an impact on their perceived stress or the family functioning, but it did not detract for those aspects of family care and was not an extra burden. Families with children with special healthcare needs are often consumed with the health care of their children and need to remember how to have fun with their children. Even with a small sample, we were able to demonstrate a positive outcome with our collaboration with a children's theater company during a socially distanced time. We recommend that nurses consider collaboration with arts therapy and other creative outlets to encourage families to remember to enjoy the fun aspects of family life.

Funding: National Endowment for the Arts, 1862894-38-C-20

CHRONIC CONDITIONS

An Exploratory Study on the Work Conditions of People with Early Onset Dementia in Taiwan

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Background: ‘Early-onset dementia (EOD)’ is a medical condition wherein a person is diagnosed with dementia before the age of 65. Most people with EOD are under the retirement age prescribed by law. When they experience behavior change and commit mistakes in the workplace due to early-onset dementia, it may lead to problems with employers, pension funds, and finances. However, few studies have studied people with EOD about their employment status.

Purpose: This study examined this topic from three perspectives: people with EOD, their primary caregivers, and employment specialists, to gain insight into how people with EOD adapt to work, how the primary caregivers, and employment specialists provide assistance for them to continue working.

Methods: A qualitative research design was used to conduct semi-structured in-depth interviews. The interviews were outlined in accordance with the research questions and the concept of the right to work specified in the United Nations Convention on the Rights of Persons with Disabilities. Fourteen participants (5 people with early-onset dementia, 6 primary caregivers, and 3 employment specialists) were recruited using purposive and snowball sampling and participated in the study. The interview data was examined using thematic analysis.

Findings: First, the work and personal lives of people with EOD became interwoven. People with EOD began to realize that they tended to forget various things that affected their work. Most learned to use auxiliary tools suitable for them at work. Some discussed with their employers changing work content or adjusting work processes, whereas others adjusted their work processes on their own according to their capabilities. They had all made the effort so that they could stay in the workplace and utilize their competence to remain employed. Second, the primary caregivers understood that people with EOD may not be able to adapt to regular workplace environments. Such relatively low inadaptability was caused in part by the lack of suitable venues where people with EOD could deploy their remaining competence or receive training to maintain their skill set. The caregivers suggested that the government should establish day-care centers for people with EOD which would allow them to participate in meaningful activities, and their primary caregivers to rest properly or return to the workplace. And third, by establishing a career support system for people with EOD, the employment specialists assisted them in enhancing their career stability, confidence at the workplace, and quality of life during their adaptation to working. If the work tasks could be broken down into small chunks and auxiliary tools provided, people with EOD could still be highly competent at work.

Conclusions: These findings revealed there is room for improvement in protecting the right to work of people with EOD and clarified the need for adequate adjustments in their work environment. The aim is for the public to recognize the competence of such people as well as to safeguard their right to work.

COVID, Social and Emotional Distress Among Hispanics with Chronic Disease

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Purpose: The purpose of this study was to examine the effects of the COVID-19 pandemic on Hispanic individual's perceived social and emotional distress, and the pandemic's impact on individuals' abilities to manage their chronic disease(s).

Background: Hispanics in the U.S. represent a fast-growing population numbering approximately 60 million people. The COVID-19 pandemic presented several social, emotional, health, and economic stressors for vulnerable, underserved Hispanic communities. Nationally, many Hispanic families reportedly experienced higher levels of social and emotional distress than other Americans during the COVID-19 global crisis but it was unknown how this affected their ability to manage their chronic diseases.

Methods: Twenty-five one-on-one interviews were conducted with Hispanic individuals who had at least one chronic illness. Sample questions included: Tell me about your experiences during this COVID-19 pandemic? Tell me about your chronic illness and how you are managing your illness during this pandemic? What resources and healthcare have you needed most during the pandemic? How has COVID-19 affected your family, friends, and community? A 20-item Spanish language social distress scale was also administered. Interviews were conducted by a trained bilingual community health care worker well known to the community and a descriptive qualitative analysis was performed by members of the research team. An outcome analysis was conducted on the social distress scale based on raw (0-20 range) total social distress scores

Assessment of Findings: Participants were Hispanic (N=25), middle-aged (57.04±10.98) with asthma, diabetes, hypertension, and cancer. A majority were married, had large families, and a household income below $60,000. Results showed a high prevalence of the 20 social distress issues in the past week, including 1) problems with violence or physical abuse in my family or myself (100%), 2) problems with depression or anxiety in my family or myself (92%), and taking care of my family's different needs and problems (80%). Six themes related to the more critical needs during the pandemic were identified: 1) Challenges faced during COVID 19, 2) Impact of COVID-19 on access to needed routine and emergency health care, 3) Informational needs and misinformation, 4) Emotional and social support, 5) Individual and family support, and 6) Community needed resources. All participants reported experiencing difficulty accessing adequate and timely health care as well as their prescription medications to manage their chronic illness during the height of the pandemic.

Conclusion: High levels of social, economic, and emotional distress were found in Hispanics with chronic health conditions during the COVID-19 pandemic, with the highest-ranking concerns indicating a need for more community services and resources to meet basic economic and emotional needs. The majority of participants reported major challenges in access to routine and emergency medical health care and services, financial assistance for food, rent, utilities, clothing, and prescription medications. Effective culturally tailored, and linguistic appropriate interventions are critically needed to address healthy inequities and disparities enhanced by the COVID-19 pandemic among diverse and underrepresented populations.

Funding: Dick and Timmy Burton Grant Award

CHRONIC CONDITIONS

Completion of a Behavioral Weight Management Program Is Affected by Quality of Life

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Background: Moderate rates of attrition frequently hamper clinical studies employing behavioral therapies for weight management in overweight and obese adults. Pretreatment characteristics (e.g., beginning body weight, quality of life [QOL]) have been demonstrated to be significantly linked with effective adoption and completion of a behavioral weight management program; however, this association is poorly understood in patients with heart failure (HF).

Objectives: To assess personal and psychosocial differences between successful – defined as the ability to adapt and complete a 3-month behavioral weight loss program – and unsuccessful participants in an RCT examining the effects of a high protein vs. standard protein diet on adiposity, and 2) identity predictors of program completion.

Methods: Demographic and psychosocial assessments were completed at baseline and three months. In addition, comparisons were made between participants who completed the three-month weight management program (n = 34) and participants who did not (n = 15).

Results: Forty-nine patients – mean age 59.1 ± 9.8; weight 248.8 ± 29.7 pounds; EF 37.3 ± 12.5%; peak VO_2 12.5 ± 3.7 mg/kg/ml; 55% White; 20% Hispanics; 16% Blacks; 8% Asians – participated in the study; 34 (70%) completed the weight management program. There were no age or gender differences between the two groups; Whites were less likely to complete the intervention than their counterparts ($p = 0.47$). There were statistically significant differences in QOL scores between completers and non-completers; overall QOL 40.8 ± 20.3 vs. 58.7 ± 24.2 (higher scores, worse QOL), $p = 0.010$; physical QOL 16.4 ± 9.3 vs. 24.7 ± 10.4, $p = 0.008$; emotional QOL 9.1 ± 7.0 vs. 14.5 ± 7.5, $p = 0.020$. In a model controlling for age, gender, race, baseline weight, and functional status, QOL explained an additional 19% variance in completing a weight management program.

Conclusion: To test the effects of a behavioral weight management program, personal and psychosocial variables (e.g. QOL) may be useful as pretreatment predictors of success level and/or attrition in obese patients who participate in an RCT. These factors can be used in developing readiness profiles for weight management, a potentially important tool to address the issue of low success/completion rates in the behavioral management of obesity.

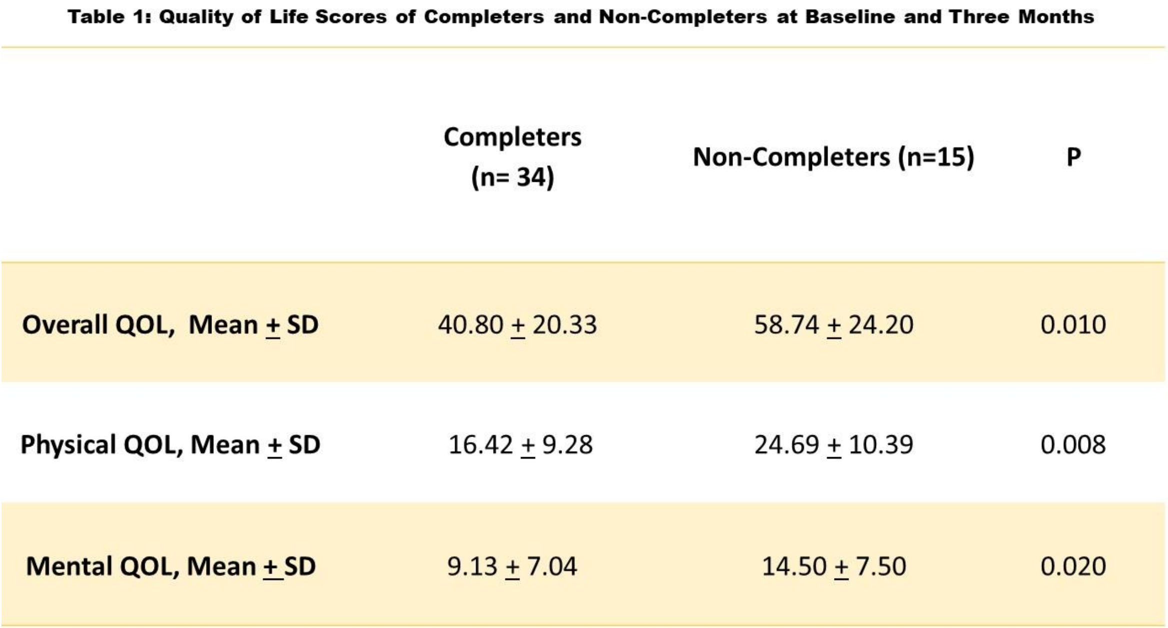

Table 1: Quality of Life Scores of Completers and Non-Completers at Baseline and Three Months

	Completers (n= 34)	Non-Completers (n=15)	P
Overall QOL, Mean ± SD	40.80 ± 20.33	58.74 ± 24.20	0.010
Physical QOL, Mean ± SD	16.42 ± 9.28	24.69 ± 10.39	0.008
Mental QOL, Mean ± SD	9.13 ± 7.04	14.50 ± 7.50	0.020

Funding: National Heart, Lung, and Blood Institute (1R01HL093466)

CHRONIC CONDITIONS

Sex-Based Differences in Peripheral Arterial Disease: A Secondary Analysis

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Purpose: This study explored sex-based differences and similarities among individuals with peripheral arterial disease (PAD) in southwest Louisiana (LA) and examined the moderating effect of sex on selected PAD determinants, degree of symptom severity, initial treatments, and patient outcomes (see Figure 1).
Background: PAD is a significant marker of overall cardiovascular disease affecting more than 8.5 million people in the U.S and over 220 million worldwide. Historically deemed a male-dominant disease, PAD remains a significant cause of morbidity and mortality among women. Previous studies suggest women present 10-20 years later in life and have more pronounced vessel occlusion and inferior outcomes when compared to men. However, population-based studies are limited, and to date, no published studies include individuals residing in southwest LA.
Methods: A retrospective, cross-sectional, correlational design was used to analyze secondary data from 15,028 patient cases between 1/1/2015, and 12/31/2020. Cases with ICD-9/ICD-10 diagnosis codes for PAD were included in the sample. Demographic variables were sex, age, race, marital status, type of insurance, and zip code. Variables for determinants of PAD included smoking history and body mass index. Age at diagnosis, degree of symptom severity, and initial type(s) of treatment measures (medical or surgical) served as both independent and dependent variables. Mortality (death within1-year) was the outcome variable. Univariate descriptive statistics were used to analyze frequencies among variables and how they varied by sex. The hypothesized moderating effect of sex was analyzed using multivariate statistics, with the development of a series of regression models.
Results: No sex-based difference in age at initial diagnosis was found between men and women in this population. Men were less like to have ever smoked than women, but no difference was seen in current smoking status. Surprisingly, 42% of women and 28% of men presented with < 30% vessel occlusion (normal), while only 19% of women had total vessel occlusion when compared to men (29%); both findings were statistically significant ($p < .001$). See table 1. While no difference was noted between men and women for medical management, there was a statistically significant difference between groups in that men were more likely to undergo surgical repair ($p < .001$). No sex-based difference was found for mortality; however, being a current smoker was statistically significant with a 21% increased chance of death within 1-year following initial diagnosis. The most relevant finding was how the variable symptom severity as measured by Color-Flow Duplex imaging scores frequently negated any interaction or moderating effects of sex when added to the model.
Conclusion: The hypothesized moderating effect of sex was not found in this sample. Findings indicate that this population is seeking and receiving care sooner than patients with similar disease in other parts of the country, regardless of sex. Moreover, treatment plans are being guided by the most robust diagnostic methods, mitigating negative outcomes. The greatest risk for disease progression and death was smoking, reinforcing the need for continued patient education with the development of nurse-led of smoking cessation programs.

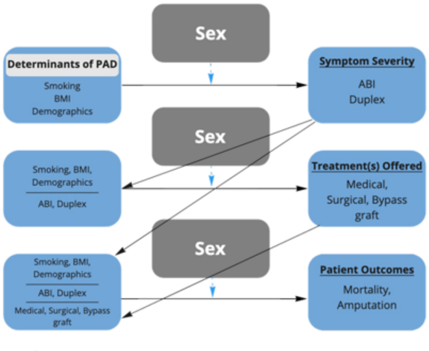
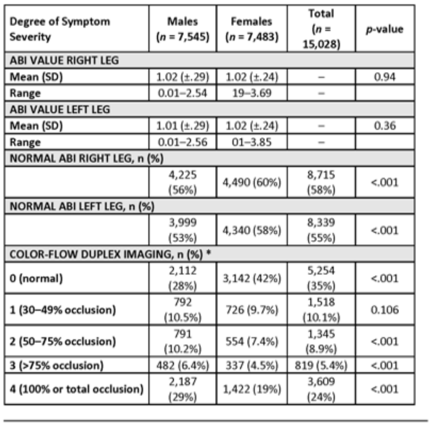


Figure 1| This recursive model illustrates the hypothesized moderating relationship of sex between select determinants of PAD on symptom severity, select determinants of PAD and symptom severity on treatment(s) offered, select determinants of PAD and symptom severity and treatment(s) offered on patient outcomes.

Table 1.

This table provides information related to the degree of symptom severity by sex. *n adjusted to sum 7,545 and 7,483, respectively, while minor differences in percentages not totaling 100% are attributed to rounding estimations.



Degree of Symptom Severity	Males (n = 7,545)	Females (n = 7,483)	Total (n = 15,028)	p-value
ABI VALUE RIGHT LEG				
Mean (SD)	1.02 (±.29)	1.02 (±.24)	–	0.94
Range	0.01–2.54	19–3.69	–	
ABI VALUE LEFT LEG				
Mean (SD)	1.01 (±.29)	1.02 (±.24)	–	0.36
Range	0.01–2.56	01–3.85	–	
NORMAL ABI RIGHT LEG, n (%)				
	4,225 (56%)	4,490 (60%)	8,715 (58%)	<.001
NORMAL ABI LEFT LEG, n (%)				
	3,999 (53%)	4,340 (58%)	8,339 (55%)	<.001
COLOR-FLOW DUPLEX IMAGING, n (%) *				
0 (normal)	2,112 (28%)	3,142 (42%)	5,254 (35%)	<.001
1 (30–49% occlusion)	792 (10.5%)	726 (9.7%)	1,518 (10.1%)	0.106
2 (50–75% occlusion)	791 (10.2%)	554 (7.4%)	1,345 (8.9%)	<.001
3 (>75% occlusion)	482 (6.4%)	337 (4.5%)	819 (5.4%)	<.001
4 (100% or total occlusion)	2,187 (29%)	1,422 (19%)	3,609 (24%)	<.001

Association of Caregiving and Cardiovascular Disease with Race/Ethnicity

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Aim: To investigate the association of caregiving-related conditions with cardiovascular disease (CVD) risks and CVD conditions among family caregivers (FCGs) of persons living with dementia, and evaluate relationships by race and ethnicity.
Background: Given the physical, psychological, and cognitive conditions associated with Alzheimer's disease, FCGs of persons with dementia experience high stress, depression and anxiety. Stress related to caregiving has been linked to CVD. The risk of CVD varies by race and ethnicity; however, there is a gap in understanding the association of caregiving-related conditions (caregiving intensity and caregiving duration) and CVD risks with race/ethnicity.
Methods: The Behavioral Risk Factor Surveillance System data (2015-2020) was used. Logistic regression models that included race/ethnicity, caregiving intensity, caregiving duration, and their interaction as predictors were used to model psychological (depression), behavioral (smoking, heaving drinking, exercise), metabolic risk factors (overweight, obesity, diabetes) and CVD conditions (angina/coronary heart disease, stroke, or myocardial infarction).
Results: In dementia FCGs (N=6,132), most were ≥55 yrs. (32% 55-64; 36% ≥65), female (49%), and non-Hispanic White (77%). Caregiving duration was a predictor for heavy drinking and exercise across all race/ethnicity groups ($p < .05$). Caregiving intensity was a predictor of smoking, heavy drinking, exercise, diabetes, and CVD conditions across all race/ethnicity groups ($p < .05$), while there were no differences in weight and obesity. Depressive symptoms were a significant risk factor in non-Hispanic White FCGs. In non-Hispanic Whites, those providing care ≥40 hours/week were more likely to have depressive symptoms than those ≤8 hours/week ($p = .0244$). For heavy drinking, those providing support ≥40 hours/week were less likely to drink heavily than ≤8 hours/week ($p < .0001$), and 20-39 hours/week ($p = .0004$). Non-Hispanic White FCGs caring ≤8 were more likely to drink heavily than ≥40 hours/week ($p < .0001$). In non-Hispanic Black FCGs, those caring 20-39 hours/week were more likely to drink heavily than ≥40 hours/week ($p = .0228$). In diabetes, FCGs caring ≥40 hours/week were more likely to have diabetes than those ≤8 ($p < .0001$), 9-19 ($p < .0001$), and 20-39 hours/week ($p = .0074$). Among non-Hispanic White FCGs, those providing care ≥40 hours/week were more likely to have diabetes than those ≤8 ($p < .0001$), 9-19 ($p < .0001$), and 20-39 hours/week ($p = .0486$). For CVD conditions, those providing care ≥40 hours/week were more likely to have a stroke, angina, and myocardial infarction compared to those providing care ≤8 hours/week (all $p < .05$).
Conclusions: We confirmed that the more time dementia FCGs spent providing care per week, the more likely they experience certain CVD risks and conditions. The findings from this study demonstrated that CVD risks and conditions associated with caregiving intensity varied by race and ethnicity. Future studies should focus on designing and testing FCG-centered interventions for racially and ethnically diverse FCGs that include respite care resources, physical and emotional support, and peer support groups for managing their own cardiovascular healthcare needs.

Funding: Dean's Intramural Award

Tailored Health Promotion Video 4 Moms Should Include Positive Messages & Storytelling

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Purpose/Aims: To obtain feedback from reproductive-aged women with cardiometabolic disease risk about a video designed to promote enrollment in a lifestyle change program and gather suggestions about ways to tailor video messages for this high-risk population.

Rationale/Conceptual Basis/Background: Targeting reproductive-aged women at high risk for Type 2 Diabetes (T2D) provides an opportunity for prevention earlier in the life course. This is especially important as a woman's experiences during her reproductive years may have a large impact on her future risk of T2D. For example, her risk is seven to 10 times higher if she has had gestational diabetes (GDM). Despite these risks, T2D is preventable. Evidence-based programs, such as the National Diabetes Prevention Program (DPP), can reduce the risk for developing T2D by nearly 60%. However, only 0.4% of adults with prediabetes participate in the DPP and reproductive-aged women are 50% less likely to participate than older women. In prior work, our team developed a mobile 360° video to address diabetes risk awareness and promote DPP enrollment among at-risk adults, however this video was not designed specifically for reproductive-age women. Our goal was to obtain feedback from high-risk reproductive-age women to tailor video messaging for this population.

Methods: Focus groups and a qualitative descriptive approach were used. Women's feedback (n=20) was sought about tailoring video messages about T2D health risks in reproductive-aged women and the benefits of the DPP. Participants were biological females, aged 18 to 40, who were grouped in focus groups by the following health risks: 1) history of GDM or a hypertensive disorder of pregnancy, 2) a diagnosis of prediabetes, or 3) a BMI classified as obese. Three focus groups were conducted via Zoom. They were recorded and transcribed for analysis. Qualitative content analysis was used. Deductive codes were used to identify concepts related to the research question and inductive codes were created for novel insights shared by participants. The codes were then organized into categories and themes.

Assessment of Findings/Outcomes Achieved: The main themes we identified included positive feedback, negative feedback, motherhood, and the importance of storytelling. While some participants said the video produced a sense of urgency for healthy behavior change, all participants agreed that adaptations could make it more applicable and effective for motivating health-behavior change in reproductive-age women. The participants felt a tailored video should recognize the complexities of being a mother and how these dynamics contribute to women's difficulty engaging in healthy behaviors without stirring feelings of guilt. Women desired a video with a positive, problem-solving perspective, and live links as clickable resources for practical solutions promoting health behavior change (such as the DPP). Women suggested using storytelling to describe how complications experienced during pregnancy impact long-term health and to motivate health-behavior change.

Conclusions/Implications: Tailoring of health-behavior change messaging is required to address the unique needs of reproductive-aged women and to motivate enrollment in lifestyle change programs. Optimally, messages should address commonly encountered barriers by providing realistic solutions and a positive tone, combined with storytelling linked to human connection.

Funding: This project was funded by a grant from the Educational Resource Development Council (ERDC) at the University of Utah.

Correlates of Sars-Cov-2 Anti-RBD IgG Antibody Titers Among Homeless Adults

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Purpose/Aims: The Los Angeles Department of Public Health has developed extensive measures to keep person experiencing homelessness (PEH) safe by providing COVID-19 testing, contact tracing, outbreak control, and vaccinations for PEH. In this study, we explored SARS-CoV-2 antibody response among PEH categorized by COVID-19 diagnosis and vaccination status. We also assessed associations between sociodemographic, psychosocial, and behavioral factors with SARS-CoV-2 antibody response among PEH with prior COVID diagnosis and/or vaccination history.

Rationale/Background: COVID-19 surveillance in PEH may be subject to stronger detection bias than in other populations, primarily due to presumed differences in access to health services and testing. Serological studies can help assess the extent of undetected cases within a population over time. While measurement of antibody levels against SARS-CoV-2 can help assess immune protection against future infection, currently, no studies have been conducted among PEH living in Skid Row, Los Angeles. Thus, vaccine history and considered antibody response of the most vulnerable population residing within the largest pool of PEH living in any one area remains unassessed.

Methods: Guided by the Comprehensive Health Seeking and Coping Paradigm (CHSCP), a case-control study was conducted during the COVID-19 pandemic to assess antibody response against SARS-CoV-2 among PEH (N=97) with and without prior history of laboratory-confirmed COVID-19 diagnosis. PEH resided in one of three shelters, or two drug treatment sites, or were unsheltered in Skid Row. The primary outcome variable was IgG titers against SARS-CoV-2 receptor binding domain (RBD). Immune status was categorized as: “No prior COVID-19 diagnosis and unvaccinated”, “Prior COVID-19 diagnosis and unvaccinated”, “No prior COVID-19 diagnosis and vaccinated”, “Prior COVID-19 diagnosis and Vaccinated”, “No prior COVID-19 diagnosis and Vaccination unknown”, and “Prior COVID-19 diagnosis and Vaccination unknown”. Anti-RBD and Anti-NP IgG End-Point Titers were assessed by IgG ELISA. Descriptive statistics, ANOVA and linear regression modeling analyzed were utilized to analyze our data.

Assessment of Outcomes: The mean age of the 69 participants was 47.0 (SD 12.5). The majority were male (70.7%), Latinx (50.5%) or Black (28.3%), and US born (84.8%). Over half of the PEH reported being vaccinated. We found high anti-receptor binding domain (RBD) IgG titers among 5 of 15 PEH who reported no prior COVID-19 diagnosis and not having been vaccinated, suggesting undiagnosed and/or asymptomatic SARS-CoV-2 infections. PEH vaccinated with Janssen had the lowest mean anti-RBD IgG titers. In multivariable analysis, we found negative associations between level of SARS-CoV-2 antibody titers with the Jansson vaccine and depression, signaling the need for integrated care of PEH with depression and COVID-19.

Conclusions/Implications: To date, this is the first study to determine the relationship between health and SARS-CoV-2 antibody response. Further research is warranted to confirm the immune response, acute and over time, to SARS-CoV-2 infection and to COVID-19 vaccinations, particularly among PEH whose immune systems may be impacted by their multiple health conditions. These findings will inform clinicians and policy makers to develop best practices to protect vulnerable populations during global emergencies such as epidemics and pandemics.

Funding: Support provided by the UCI Craft COVID Award

Vaccine Hesitancy in the Pediatric Ambulatory Care Setting

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Purposes/Aims: To understand the prevalence of COVID-19 vaccine hesitancy in a pediatric ambulatory setting; to appreciate what stage of change these parents are in when deliberating about the COVID-19 vaccine; and to explore contextual factors that influenced the parents' choice to vaccinate or not.

Background: In Spring 2021, COVID-19 cases continued to rise with over 550,000 confirmed cases and 6,644 deaths. Despite the strong recommendations from the American Academy of Pediatrics and the Center for Disease Control for all eligible individuals to be vaccinated, only 47.1 of eligible patients were vaccinated at this time. The COVID-19 vaccine had been shown to be safe and effective for children 6 months of age and older. In October 2022, Colorado's pediatric population vaccination rates failed to meet the national goal of 70% completion of the primary series for eligible patients with only 38.8% ages 5 – 11 and 65.2% ages 12-17 had completed the primary series.

Methods: An exploratory, cross-sectional convenience sample design was used. Any parent/guardian with a child eligible to receive the COVID-19 vaccine at the time of taking the survey could participate. A 56-item REDCap survey was created and tested for face validity. This survey included adapted questions from the validated World Health Organization's Vaccine Hesitancy Scale, including questions regarding trusted sources of information. Additional items were asked to identify what stage of change parents/guardians were in. Univariate and descriptive analysis was performed for this study.

Outcomes: 52 surveys were completed by participants. 87% of participants were vaccinated and 60% of participants with eligible children had received at least 1 dose of the COVID-19 vaccine. None of unvaccinated participants were interested in getting their child vaccinated; two-thirds were in the pre-contemplation stage of change. Of those who had an ineligible child for the COVID-19 vaccine, 74.4% would vaccinate their child once eligible. In addition, 67% strongly agreed/agreed that the COVID-19 vaccine was "good for preventing COVID-19", and 72% responded the same way "the vaccine was important for their child's health". Healthcare professionals were identified as the most trustworthy source for vaccine information.

Implications for Practice: The findings contribute to understanding how stages of change influence parental decisioning and recognize the important role of all healthcare providers and nurses when addressing COVID-19 vaccine hesitancy. Outcomes highlight the complexity when parents are deciding to vaccinate their child during a time when infection rates escalated, and COVID-19 vaccination was politically charged. This data will be used to drive the creation of a healthcare clinical toolkit to equip direct care team members with necessary tools and resources to address vaccine hesitancy in a pediatric setting to be disseminated internally and with our community partners.

Stakeholder Perspectives on Promoting Equity in Community-Partnered Research

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Purpose: This study examined community leaders' and stakeholders' shared experiences and perspectives of community-academic research partnerships to inform the development of a Community Leadership Institute for Equity (C-LIFE) training program to strengthen capacity for community-partnered research.

Background: In order to answer the call to anti-racist approaches within nursing research, nurse scientists must engage with community leaders and stakeholders, who offer critical insights of priorities of historically marginalized communities. While community-partnered research is considered an ideal approach for health equity research, there is a need to better understand systemic barriers to truly promote equitable academic-community research partnerships.

Methods: Informed by the Public Health Critical Race praxis (PHCR) theoretical framework and Community-Partnered Participatory Research (CPPR) research approach, we analyzed qualitative data from five virtual focus group sessions that occurred during a C-LIFE conference. Focus group facilitators included academic trainees and community partners and were trained in qualitative research. Focus groups were recorded, transcribed, and identifiers were removed and then a stepwise community-partnered thematic analysis was conducted with the data.

Results: Three key sub-themes were identified within an overarching main theme of '*promoting equity*.' In the process of engagement with academic research, participants expressed *the need to acknowledge racism and the extractive nature of academia*, described *experiences of navigating challenges with academic researchers*, and provided advice for academic researchers to *not simply value data but also honor community expertise and power*. While participants were hopeful and optimistic about CPPR, within the context of Black Lives Matter protests, they highlighted barriers and facilitators to equitable academic-community research partnerships.

Implications for Further Research: The results show the importance of examining and valuing community leader and stakeholder perspectives and experiences with academic-community partnerships in order to promote accountability and responsibility of implementing authentic CPPR to advance health equity. Nurse researchers should consider the utility of employing a PHCR praxis and framework to address the challenges community partners often face within academic settings.

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Implementation of a Community-Based Hypertension Program: A Pilot Study

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Purpose & Aims: The purpose of this research study was to implement a community-based hypertension (HTN) program within a diverse community. The study aims included identifying a need for community-based HTN resources and providing education and accessible resources for those with documented HTN.

Background: Hypertension is the most common primary diagnosis in the U.S. It affects nearly one in two adults and is the major preventable risk factor for heart disease, stroke, and end-stage renal disease. In 2020, the Surgeon General put out a call to action to improve HTN control that includes providing diverse interventions at places where people live. The residents of downtown Ogden, Utah, represent a diverse population with a higher proportion of Hispanic individuals, a lower median household income, and lower educational attainment. This collaborative and interdisciplinary effort between Weber State University Annie Taylor Dee School of Nursing and the Weber-Morgan Health Department provided learning opportunities for graduate and undergraduate nursing and medical laboratory students.

Methods: This study recruited 29 adults from community settings with two documented BPs per the AHA guidelines. All participants completed pre/post-intervention surveys regarding knowledge and attitudes about HTN and lifestyle and had a pre/post-physical exam and a serum cardiac profile. The program provided lifestyle tools such as grocery vouchers, BP cuff, activity tracking devices, and three monthly education classes offered in person or via Zoom in English and Spanish. Class content included BP monitoring, HTN management, lifestyle (nutrition and activity) modification, and allowed time for questions. Finally, each participant was referred for follow-up care with local clinics and providers.

Results: After three months, 93% (27) of the initial recruits completed the program. Demographic data supported a diverse group: 65% stated Spanish was their primary language; 56% were employed; 35% were uninsured and did not have a primary care provider. Overall, SBPs and DBPs saw a statistically significant decrease and a positive but not significant improvement in the cardiac profile results. Participants overwhelmingly felt the program positively impacted their lives, and all commented on the need and importance of having the community program.

Conclusions: This study’s results suggest collaborative community-based BP programs can provide critical resources to diverse populations. Community members are eager to participate and benefit from this type of program.

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Human Trafficking within American Indian Women: A Scoping Review

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Background: Human trafficking is a form of modern-day sex slave trading or exploitation that has become a public health crisis. Despite the growing awareness of human trafficking globally, there is insufficient understanding of the issue and a dearth of literature on the impact of this illicit activity on women, especially American Indian (AI) women. Research suggests that AI women are at a higher statistical risk to become victims of human trafficking when compared to other cultures, with most of them being lured into human trafficking by the age of 15.

Aim: The aim of this scoping review was to identify what is known about human trafficking among AI women and to identify issues and research gaps to inform educational programs, future research, and policymaking.

Methods: The PRISMA-ScR guidelines were used as the framework for this scoping review, with the goal to evaluate what is already known about the topic and what gaps exist. The steps followed were: 1) providing a statement of the question and objectives, 2) stating eligibility criteria and information sources, 3) providing the electronic search strategy and process for selecting sources of evidence, 4) giving numbers of sources of evidence screened, 5) summarizing the main results, and 6) provide a general interpretation of the results. An electronic database search was conducted in Embase, Pubmed, CINAHL, SCOPUS, PsycInfo, Cochrane Library, Google Scholar for relevant articles. MeSH terms used in the search were human trafficking, sex slavery, sexual exploitation, native women, Indigenous, Indians North America, and American Indian. Inclusion criteria included literature written within ten years, articles about human trafficking or sexual exploitation, American Indian Women, primary research studies, rapid reviews, systematic reviews, grey literature, and written in the English language. Exclusion criteria included literature greater than ten years, studies not written in English language, and articles talking about youth or minors. Titles and abstracts of the articles were screened by two independent reviewers. Full-text articles meeting the inclusion were retrieved and reviewed for relevance.

Results: The initial search yielded 322 articles, with duplicates removed (n=4). After title and abstract screening, 291 articles were excluded as not meeting the inclusion criteria. A total of 27 full-text articles were reviewed for eligibility, with 13 articles excluded as not meeting the inclusion criteria. Thus a total of 14 articles met the inclusion criteria and were included in the scoping review. Common themes were identified including vulnerabilities and risk factors among AI women, with long-term effects of human trafficking victimization impacting individuals, families, and communities. Limited evidence supporting culturally sensitive collaborative efforts to combat human trafficking among AI women was reported.

Conclusion: The long-term effects of human trafficking among AI women may lead to chronic physical ailments or psychosocial conditions, while communities are impacted due to increasing costs associated with healthcare, mental health services, and welfare assistance. The underlying cultural needs of AI women who experience human trafficking is limited, yet merits additional educational programs, future research, and policymaking to counter this illegal activity.

Maternal Perspectives on Peer Support Systems Engaged with Technology

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Purpose: The purpose of this study was to examine mothers' reflections on the guidance received from social and healthcare systems regarding use of technology platforms to search for information and support resources when children's congenital anomalies are diagnosed in utero. The aims were to 1) identify emerging themes that describe mothers' perceptions of guidance from healthcare and social systems and 2) measure the significance of race, age, and education as predictors for technology platform guidance.

Background: Worldwide, 3% of infants are born with a congenital anomaly, with fetal diagnosis possible by the 16th week of gestation. Technology platforms (e.g., websites, social media, and mobile apps) allow mothers access to diagnosis information and related resources. Mothers' social systems of friends and family, along with pregnancy and NICU healthcare systems, likely guide, and influence use of technology platforms in the journeys from fetal diagnosis to NICU discharge.

Methods: This was a convergent mixed methods study consisting of a 19-question Likert scale survey and semi-structured interviews based on concepts from the Systems Engineering Initiative for Patient Safety (SEIPS 3.0). Recruitment was a targeted convenient sampling via Facebook private groups. Upon completion of the survey, mothers were invited to sign up for a Zoom interview. ANOVA analysis measured group differences for race, education, and age. The SEIPS 3.0 concepts of journey, task, technology, and socio-organization were used as a priori codes to guide the detection of emerging themes.

Findings: The total sample consisted of 74 mothers, and the interviewed sample was 12. Eighty-two percent of the total sample were White, 62.2% had a bachelor's or graduate degree, and 43.2% were aged 29-33. Significant differences based on mothers' education were found in response to SEIPS 3.0 socio-organization questions on healthcare provider guidance, $F(3,70) = 5.49$ $p = .002$. Cronbach's reliability for the SEIPS 3.0 provider questions was .78. Mothers with limited education reported more provider guidance than mothers with bachelor or graduate degrees. No significant differences in age, or race were found for responses to provider guidance questions. Additionally, no significance was found for age, race, education regarding social guidance. Emerging themes on healthcare providers' guidance were 1) caution regarding technology platforms to search for diagnosis information, 2) encouragement to search Facebook for peer support groups. Four themes emerged related to Facebook, 1) Facebook peer stories build confidence, 2) mothers in Facebook groups understand, 3) participation requires a tolerance for difficult stories, and 4) sharing gained knowledge is gratifying. Results showed healthcare providers guide mothers away from technology platforms for diagnosis information, but towards technology platforms for peer support. Emerging Facebook themes give evidence virtual peer support groups are more than sources of information, but systems of communities.

Implications: Media ecology researchers describe the types of Facebook groups mothers engage for peer support as *virtual settlements.* Nursing research and theory development are needed to explore virtual settlement ecologies as their own systems separate from healthcare and social systems. Equity and inclusion concerns in healthcare research must apply to systems engaged through technologies.

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EFFECT OF THE PANDEMIC ON NURSES

Nursing in the Pandemic: Insights from Nurses of Color

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Purpose: The purpose of this study was to examine the pandemic experiences of Registered Nurses (RNs) who identify as Black, Indigenous, or other People of Color (BIPOC). Specifically, the study explored the lived experiences of BIPOC RNs during the pandemic with an emphasis on factors affecting their feelings about their RN job and decisions to stay in or leave a job.

Background: RNs have an essential role in promoting health equity in the US, work which is best accomplished when the nursing workforce itself reflects the racial diversity of the populations it serves. Limited available studies of nurses of color suggest higher rates of negative work outcomes such as dissatisfaction and turnover, but there is generally little data on the overall experiences of BIPOC RNs in the workplace. In addition, few studies of RNs explicitly discuss racism as it impacts RNs' career decisions.

Methods: This study used a hermeneutic phenomenological approach to understand the meaning BIPOC RNs attributed to their nursing role and job decisions during COVID. RNs who had been licensed in Washington state during the pandemic were recruited through professional groups and social media and independently interviewed regarding their experiences during the pandemic. Questions focused on understanding the meaning nurses of color attributed to their nursing role and job decisions, particularly in light of their racial identity. A metacoding process and within- and across-case analyses were used to analyze data.

Findings: Thirteen nurses participated. The overarching theme, answering the call, was drawn from their descriptions of the sense of purpose they felt at the onset of the pandemic. Other themes included "COVID shone a light", "being consumed by COVID", and "wondering 'is it worth it?'". Participants shared how their racial identities shaped some of their experiences and responses and helped them make decisions about jobs. While they did not attribute all their workplace experiences to racial identity, they noted how it impacted many facets of their work and added to the stressors felt in the workplace and the community. Key topics drawn from findings include issues with management, experiences of racism in the workplace, RNs' sense of calling, and self-care.

Conclusion: Findings provide insight into the unique perspectives of nurses of color that are not well represented in the literature. These stories convey critical information about factors that shaped their pandemic experiences and how they navigated through a chaotic time. Healthcare leaders can use study findings to examine the workplace with a goal of eliminating biased practices and identifying a broad range of support mechanisms for nurses, with specific attention to the needs of BIPOC RNs. For researchers, findings show a need for further examination of how contextual elements at home and at work influence nurses, and warrant transparent reporting of the successes and failures from initiatives to eliminate racism and support RNs in the workplace.

The Psychological Well-Being of Minority Nurses during COVID- 19: A Scoping Review

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Aim: This scoping review examines the types of available evidence, findings, and knowledge gaps in available literature on the psychological well-being of racial and ethnic minority nurses in the United States during the COVID-19 pandemic.

Background: During the COVID-19 pandemic, healthcare workers (HCW's) struggled to provide patient care despite inadequate staffing, extended work hours, working in unfamiliar care settings, and lacking necessary resources. These challenges, combined with the stresses of caring for critically ill patients, many of whom did not survive, have led to significant stress, anxiety, burnout, and moral injury among HCW's. Nurses are the largest group of HCW's in the US. As frontline providers who deliver most direct, hands-on care to patients and families, nurses are at significant risk for psychological distress.

At the same time, nurses from racial and ethnic minorities have borne disproportionate suffering from the pandemic. They have an increased risk of death from COVID-19 and have reported experiencing significant psychological and emotional distress. These negative impacts are driving nurses of color from the profession at an alarming rate. This is particularly disturbing given the strong need for diversifying the nursing profession. A diverse nursing workforce is necessary to provide quality, culturally sensitive care that reflects the evolving demographics of the country.

Most studies addressing the psychological well-being of nurses from diverse racial/ethnic backgrounds, examine nurses outside of the United States. Given the unique organizational and structural racial disparities in the US health and socioeconomic systems, findings from studies of nurses in other countries are not generalizable to nurses in the US.

Methods: Using Joanna Briggs' Scoping Review Methodology and PRISMA-ScR reporting standards we searched eight databases in March 2022. Studies were included in this review if: 1) the study population included nurses; 2) at least one aspect of psychological well-being during the COVID-19 pandemic was measured; 3) racial/ethnic breakdown of psychological well-being outcomes were included in the analysis; and 4) the study was conducted in the United States. Seven studies met inclusion criteria. Two exclusively examined nurses; five reported findings from heterogenous samples of healthcare workers which included nurses.

Findings: Nurses of different racial and ethnic groups generally reported similar levels of psychological distress. Studies focused exclusively on nurses found that if a difference existed, White nurses were more likely to report mental health symptoms than nurses of other racial/ethnic groups. When study participants included a heterogenous group of HCW's, including nurses, most findings indicated no racial/ethnic differences in mental health symptoms. These findings were unexpected given reports of disproportionate physical, mental, and emotional impact of the COVID-19 pandemic on communities of color.

Implications: Significant gaps in the literature remain; future studies should analyze groups of healthcare workers separately (e.g., respiratory therapists, RN's, physicians), clearly identify racial and ethnic groups, and examine whether respondents' work setting matters. Understanding the differential impact of the COVID-19 pandemic on underrepresented minority nurses can inform development of interventions that support retention of a diverse nursing workforce.

Nurses' Experiences of Burnout during the Pandemic: A Qualitative Descriptive Study

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Purpose: To describe nurses' experiences working in a large hospital system located in the Southwestern United States during the COVID-19 pandemic, elucidate factors leading to and consequences of nursing burnout and distress, and offer potential strategies for alleviating nurse burnout.

Background: The COVID-19 pandemic exacerbated the already stressful, exhausting, and potentially hazardous working conditions in healthcare settings that contribute to burnout among nurses. As a result, job satisfaction plummeted, nurses left their places of employment, and some even exited the profession entirely. To address this problem, a large hospital system located in the Southwestern United States proactively surveyed its staff about their current burnout level and inquired via free-response questions what they, as a system, could do to help combat burnout. Understanding what nurses and other healthcare workers believe are the contributing factors to burnout and their perspectives regarding possible solutions can inform healthcare leaders to make systemic changes that can improve job satisfaction and employee retention and reduce burnout.

Methods: This qualitative descriptive study used inductive and deductive coding of three free-response survey questions from 8,153 respondents. Data was collected during the Fall of 2020. Deductive content analysis was guided by the Systems Engineering Initiative for Patient Safety (SEIPS) 2.0 Model. SEIPS is a theoretical framework from human factors developed to redesign healthcare work systems to improve patient, employee, and organizational outcomes. In the model, components of the work system interact and together influence work processes which in turn impact organizational, patient and employee outcomes. The work system components of the model include: 1) persons (e.g., nurses), 2) tasks (e.g., documentation), 3) tools and technologies (e.g., EHR), 4) organization (e.g., unit and hospital leadership), 5) internal environments (e.g., physical environment layout), and 6) external environments (e.g., COVID-19).

Results: Contributors to burnout spanned the six SEIPS domains. The most frequently described contributors were staffing issues, work demands, and organizational leadership. Inductively, the central theme was the concept of institutional betrayal, defined as a violation of an employee's trust in one's employer due to insufficient personnel, safety precautions, and resources. Respondents described consequences for patient care, employee morale, and their health. Solutions suggested by nurses to address burnout included: supportive and responsive leadership; timely and meaningful recognition of individual efforts and sacrifices; input into decision-making, decreased work demands, staffing composition that meets patient needs, and the provision of resources for self-care.

Implications: Many work system factors contributed to the experience of burnout among nurses and other healthcare workers during the COVID-19 pandemic. Nursing and healthcare leaders can improve nurse job satisfaction and retention and reduce burnout by addressing these factors and implementing the suggestions of nurses in this study. Leaders should consider the input of their staff when making decisions or implementing policies, practices, or procedures that affect individuals and teams; provide adequate staff, compensation, recognition, and resources; and seek to rebuild employee trust.

Funding: This study was funded by the Banner Nursing Foundation.

Intention to Leave Among Southern California Registered Nurses Thru COVID-19 Pandemic

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Purpose/Aims: This study intended to explore self-reported prevalence of intention to leave in context of nursing experience, negative health effects, searching for external position, transferring to other facility within the organization, and or another unit within the same facility among emergency-department (ED), perioperative-services, and inpatient registered nurses (RNs) from all specialties. This abstract will focus on the aggregate data from fourteen medical centers within the same integrated healthcare organization in Southern California region.

Rationale/Background: Multiple influences contribute to RNs intention to leave. The factors that urge clinical nurses exit can include but not exclusive to job stress, staffing, and bullying. RNs turnover was intensified during the COVID-19 pandemic. The pandemic may have amplified RNs' departure and the nursing shortage phenomenon. Also, might lead to organizational consequences of uncertainty and increase cost.

Methods: Data collection staggered between 11/2019 and 12/2020 to describe intention to leave among this group of nurses led by theory of nursing caring. A convenience sample of RNs anonymously/voluntarily participated in this descriptive and correlational study via SurveyMonkey®. The Turnover Intention Scale-6 (TIS-6) assessed NMs intention to leave their position. Analyses included descriptive comparative statistics.

Results: (n =1432) average age was 43.97 years with almost 16 years of nursing experience, M = 9.5 years at the organization, and worked an average of 34.56 hours/week. Of the RNs, 84.3% completed the survey during the COVID-19 pandemic. Although 60.6% reported intention to stay, 30.8% reported intention to leave.

ED nurses reported the highest intention to leave compared to other specialties (F=3.755, p=.000). RNs TIS-6 scores were higher than charge nurses' scores (F=5.851, p=.000). RNs 20-30 years of age had higher TIS-6 scores compared to the older than 40 years group (F=9.252, p=.000). Nurses with 0-10 years RN experience scored higher on TIS-6 compared to the more experienced RNs (F=13.069, p=.000). RNs working at the organization 0-5 years, (a) had higher TIS-6 scores compared to the 11-20 years group (F=2.920, p=.005) and (b) searched more often for external jobs compared to the 11-15- and 26-30-years groups (F=4.750, p=.000). RNs with 16-20 years organization commitment intended to transfer to another facility in the organization more than 21-25 and 31-35 years groups (F=5.416, p=.000). Up to 10 years experienced RNs compared to other RNs reported, (a) more job negative effect on health (F=8.316, p=.000), searching for external job (F=15.352, p=.000), transferring to another facility in the organization (F=24.178, p=.000), and transferring to another unit within the facility (F=15.278, p=.000).

Implications/Future Research: Findings revealed moderate intent to leave between specialty units, positions, younger age groups, years of experience as a RN, and years of organizational commitment. The findings are not generalizable beyond this sample. Results can help boost awareness, education, and future interventions to promote strategies to build a positive workforce to retain, recruit, and mitigate intention to leave or turnover.

EFFECT OF THE PANDEMIC ON NURSES

A Feasibility of at Home Intervention to Decrease Nurses' Burnout Post COVID-19

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Purpose: To Assess the feasibility and effectiveness of implementing a mindfulness-based stress reduction intervention via virtual reality (MBSRI-VR) at home to registered nurses (RNs) who provided care for patients with COVID-19.

Background: COVID-19 has severely exacerbated nurses' stress and burnout (BO). Numerous studies have shown the positive effects of mindfulness-based interventions (MBIs) on healthcare providers' stress and BO. Virtual Reality (VR) can facilitate delivery of MBIs effectively because it facilitates delivering standardized content uniformly. VR allows for immersive learning and experience which can modify users' response to stress, thereby improving their adaptation. VR-based interventions to help care providers are evolving and spreading quickly but their effectiveness has not been studied thoroughly.

Methods: A pre-post feasibility study involved RNs who provided care for COVID-19 at a southern California Magnet hospital. Nurses who consented received VR headsets and instructions. The headsets were preloaded with a six-session evidence-based mindfulness stress reduction intervention developed at Johns Hopkins University. Participants received a schedule and instructions explaining how to engage in the sessions. Session duration ranged between 6 and 17 minutes. Participants' stress, burnout, and mindfulness were assessed at baseline and at completion of the intervention. Survey data were collected using REDCAP and via live data capture of stress during the VR intervention. Burnout was assessed using Maslach Burnout Inventory (MBI) which measures burnout on three subscales: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA). Stress was assessed using PSS-10, and mindfulness was assessed using FFMQ-15. Pre-post data was analyzed using Wilcoxon Signed Ranks Test (p=.05) with IBM SPSS-28.

Findings: A total of 20 RNs were recruited, but only 15 used the MBSRI-VR. Furthermore, only 65% completed 3 or more sessions. Recruitment and data collection were challenged by the COVID-19 surge, nursing shortage, and technical glitches/deficiencies of the VR headsets during the study. Despite recruitment challenges, significant reduction (26%) was noted in participants' stress (Mdn=23 at baseline; Mdn=17 at completion, *p=.012*); significant improvement (14%) in participants' mindfulness (Mdn=35 at baseline; Mdn=40 at completion, p=.044). Burnout improved in two dimensions (EE dropped by 23% and DP by 35%), but the drop was not statistically significant. Of note, the PA dimension of burnout worsened by 12%, but that drop was not statistically significant.

Conclusions/Implications: Implementing VR-facilitated MBSRIs at home is feasible but challenging. The headsets used require further development of their capabilities to offer more refined notifications, improved data capturing, simpler data retrieval and organization, and more embedded tools to improve intervention fidelity. Therefore, other options for viewing MBIs, in addition to the headsets, should also be explored. While this study involved a small sample size, the findings suggest that learning and experiencing mindfulness via VR at home is effective in decreasing nurses' stress and improving their mindfulness practice. Findings also suggest that MBSRI-VR can potentially decrease the emotional exhaustion and depersonalization dimensions of nurses' burnout. Finally, not surprisingly, the findings reveal that nurses are feeling a diminished sense of personal accomplishment, which other studies have also shown, and imply further action is needed from healthcare leaders.

Understanding Gender Expression: A Principle-Based Concept Analysis

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Purpose: To better understand the experiences of transgender and gender expansive (TGE) individuals navigating the world, understandings of gender expression, how an individual chooses to convey their gender to the outside world, is necessary. The purpose of this concept analysis is to provide a theoretical definition of gender expression, for future operationalization in research with TGE communities. *Aims:* (1) To identify gaps in current use of gender expression in the health science literature. (2) To articulate a theoretical definition of gender expression in the context of TGE communities.

Description of Concept: For many TGE communities, gender expression is influenced by one's concept of self, one's gender, societal norms and pressures, complex situational interactions, and previous experiences. Using principle-based concept analysis methodology adapted from Penrod and Hupcey, the use of gender expression is examined in the western scientific, social, and historical literature based on the following four principles: epistemological, pragmatic, linguistic, and logical. Queer and TGE voices past and present are included in the analysis. Within the TGE context, gender expression is clearly defined and consistently used in social and popular media as well as in historical lesbian and gay writings. The distinction between the adjacent concepts of gender and sexuality remains clear despite the areas of overlap and interaction. In western health science literature, gender expression is often used as a surrogate or synonym for gender, or left unidentified all together, creating ambiguity and difficulty with generalization of findings. The analysis resulted in substantial evidence in support of utilizing gender expression as situational context to more accurately understand the nuances of the TGE experience. From Penrod and Hupcey's methodology, a theoretical definition emerged, suitable for operationalization and validation in different TGE communities.

Link to Research: While TGE communities have defined the concepts of sexuality, gender, and gender expression as separate, yet interrelated aspects of individual lived experiences, gender expression is a rarely acknowledged concept in health science literature. It is well established that individuals who do not express their gender in socially expected ways face policing, bullying, harassment, and victimization in both public and private spaces. These experiences are associated with higher levels of adverse mental health outcomes such as anxiety, depression, and suicide. However, only gender and sexuality are usually measured, overlooking an integral aspect of the experience. For meaningful research with TGE communities, gender expression must be explored and defined as an independent concept interacting with gender and sexuality.

Conclusion: Intentionally bringing gender expression into research discourse as a distinct concept from gender and sexuality allows for participants to better describe their experiences, allows for describing correlating concepts accurately, and improves the quality and relevancy of the work all while disrupting perpetration of harmful stereotypes and simplifications of causal pathways. This concept analysis sets the foundation for future research examining the interactions among sexuality, gender, and gender expression and the resulting impact on identity management strategies and mental health.

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Incivility in the Online and Hybrid Learning Environment during the COVID-19 Pandemic

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Purpose: The purpose of this study was to examine the prevalence and characteristics of incivility in the online/hybrid learning environment during the COVID-19 pandemic as perceived by both faculty and students in two schools of nursing.

Background: Over 70% of undergraduate and post-baccalaureate students are enrolled in at least one online or hybrid course, representing a substantial increase since the onset of the COVID-19 pandemic. Many schools of nursing deliver online/hybrid courses, yet facilitators and impediments to learning in this environment remain largely unexplored. One potential impediment is the presence of uncivil behaviors. Previous research documented incivility among nursing students and faculty in classroom and clinical environments such as general rudeness, cheating, or providing unclear feedback, which may be present in the online environment and further impacted by the pandemic. Uncivil learning environments are disruptive, less inclusive, and contribute to low morale among nurse educators and poor preparation of nursing students for the professional sector.

Methods: A non-experimental, cross-sectional mixed methods design was used to assess incivility in two public schools of nursing in the western United States. Participants were graduate and undergraduate students or faculty in at least one online or hybrid course. Quantitative data were collected using the previously validated Incivility in Online Learning Environments Survey. Several open-ended questions focused on the online learning environment since the onset of COVID-19 were added to the survey. Descriptive and correlational statistical analyses were performed to determine the frequency and characteristics of uncivil behaviors. Content analysis was utilized for the short open text responses and to describe overall patterns.

Assessment of Findings: Most faculty ($n = 23$, 91.3% female, 100% non-Hispanic White) and students ($n = 74$, 86.5% female, 82% non-Hispanic White) considered the online/hybrid learning environment to be more civil than uncivil. Just over half of the sample reported that incivility was a mild (43%) to moderate (31.6%) problem consistent with pre-pandemic levels. There was general agreement (>73%, Cronbach $\alpha = .946$) from both groups about what constituted uncivil behavior with negative verbal or written behaviors being the most common. Students and faculty differed slightly in their perception of which uncivil behaviors were most problematic. Participants agreed that students and faculty were equally as likely (27.8%) or that students were slightly more likely (30.4%) to be uncivil, but that these behaviors were infrequent. Qualitative findings suggest elevated stress levels, tension, pressures of competing demands, and time constraints among both groups relative to the COVID-19 pandemic. Students reported feeling disconnected from peers and faculty despite expressing appreciation for the flexibility of online/hybrid learning.

Conclusions/Implications: Although the overall level of incivility was low in this study, promoting civility during online/hybrid learning is essential for creating inclusive and equitable environments. Considering changes to course delivery related to the COVID-19 pandemic, schools of nursing must develop strategies for managing disruptive behaviors. This study contributes to formative program assessment which may lead to improved quality. Results should guide faculty and student development to ensure competencies related to enhancing civility and facilitating effective online/hybrid pedagogy.

Faculty Education to Foster an Inclusive Learning Environment for LGBTQ+ Students

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Purpose: The purpose of this pilot study was to evaluate the effect of an educational workshop to improve faculty knowledge and confidence in creating an inclusive learning environment for LGBTQ+ students.

Rationale/Background: Members of the lesbian, gay, bisexual, transgender, queer, and additional identities (LGBTQ+) community experience marginalization across many environments, including nursing education and higher education. Gender and sexual minority students report higher levels of harassment, greater dissatisfaction with their campus environment, and lack of institutional support for diversity and equity when compared others. Colleges and universities across the United States must improve inclusion for LGBTQ+ students. Improving faculty awareness and preparation, as part of broader institutional policies, are integral to the creation of inclusive classrooms, programs, and campuses. Effective faculty education needs to be developed and delivered. This work is especially important within nursing education as we strive to improve the health care of this population.

Methods: A pretest-posttest design was used for this study. Nursing faculty at a small private, university were invited to attend a workshop to foster inclusive learning environments for LGBTQ+ students. Participants were asked to complete an anonymous Qualtrics survey prior to the workshop. Survey items included self-rated knowledge of how to create an inclusive learning environment for LGBTQ+ students as well as self-rated confidence to provide an inclusive learning environment. The workshops focused on strategies to foster supportive learning environments including 1) addressing cisgender & heteronormativity, 2) increasing representation of LGBTQAI+ content and images across the curriculum, 3) using gender neutral language, and 4) providing the opportunity for students to share their name and pronouns that represent their avowed identities. Participants were then asked to complete a post-workshop survey. Pre and post workshop survey data were matched using a unique identifier created by each participant.

Outcomes: Seventeen faculty attended the workshop, while only 7 of these faculty completed the post-workshop survey. Statistical analysis is limited by the small sample size. However, trends of improvement were observed. Knowledge related to creating an inclusive environment increased from the pre-workshop measurement (M=2.57; SD=1.3) to the post-workshop measurement (M=4.0; SD=0.58), *t*(6)=4., *p*=.003. Confidence to provide an inclusive environment increased from the pre-workshop (M=2.57; SD=0.93) to the post-workshop measurement (M=4.1; SD=0.69), *t*(6)=7.78, *p*<.001.

Conclusion & Implications: Participation in an educational workshop has the potential to improve faculty knowledge and confidence to foster inclusive learning environments for students of gender and sexual minorities. As faculty improve their ability to create LGBTQ+ inclusive learning environments, they may also feel more comfortable and motivated to improve inclusion of LGBTQ+ health content within the curriculum. This is an identified need within nursing education. With this progress, there may be improved nursing care for members of the LGBTQ+ community.

Building the Pipeline: Nursing Camp for Racially/Ethnically Diverse Middle Schoolers

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Purpose/Aims: To build a pipeline of racially/ethnically diverse students interested in a nursing career.

Rationale/Background: Research shows that patients receiving care from someone who looks like themselves have higher medication adherence, improved perceptions of treatment decisions, and better outcomes. However, the racial/ethnic diversity of our state's nursing workforce does not reflect the diversity of our state's population. Therefore, a summer camp for racially/ethnically diverse middle school-aged students interested in nursing was developed and implemented to address this disparity.

Brief Description of the Undertaking/Best Practice: A social determinants of education model was used to guide a systems approach to designing and implementing a nursing youth camp. We aimed to include activities that were fun and involved movement, contact with people who looked like them, generating excitement about getting into college and nursing, exposure to an academic campus and students, discussions about the admission process and scholarships, and breaking down the complexity of academic language. Camp components consisted of 3-4-hour simulation lab activities each day, faculty presentations such as why/how I became a nurse and the wide range of nursing opportunities, a presentation by a refugee doctorate of nursing practice student, engagement with multiple affinity groups on campus, presentation about the college admission process, and lunch at dorms and campus union. Campers also had several tours of the campus, a dorm, the college of nursing, and the health sciences library showcasing an anatomy table and iron lung. A dinner was held for the camper's parents and included a presentation from the university's admission office of diversity about financial aid, scholarships, and high school student services and from the student service office regarding specific admissions processes to the College of Nursing, including courses to take and life experiences. The evening ended with a tour of the simulation center.

Assessment of Findings/Outcomes Achieved: One hundred and fifteen students applied for the nursing camp. A total of 10 middle school students were selected and participated in the camp. Campers were aged 13 ± 1.5 years, 60% female, 40% more than one race, 20% Black, 10% Hispanic/Latino, 10% Native American, and 10% Pacific Islander/Native American. Campers were asked to write a response to the question, “Tell us what you think about becoming a nurse now that you have completed this experience.” Campers reported having more interest in becoming a nurse than before this experience, a desire to interact and help people in their communities, motivation to help save lives, and an ability to see themselves as part of this university. One parent wrote, “Thank you for giving [my daughter] the confirmation that her dreams are attainable and although it will require hard work, it will be worth it.

Conclusion: The success of our inaugural camp has resulted in pursuing grant funding to support future camps. A longitudinal evaluation is planned for future nursing youth camps to determine the effectiveness of the camp experience.

Funding: Partnering for Success of Diverse Students: Investing in the Future of Nursing. Nursing Workforce Diversity HRSA Grant

Summer Health Institute for Nursing Exploration & Success: Pathway to a Bright Future

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Background: In addition to historical structural wealth inequities in the U.S., the COVID-19 pandemic contributed to a widening racial wealth gap and amplified health disparities. By strengthening and diversifying the healthcare workforce there is an opportunity to improve both wealth equity and health outcomes. Through pipeline efforts there are opportunities to not only increase workforce diversity, but to strategically enhance the economic development of neighborhoods and families through young people in what we know will be one of the few areas of job growth in the next several decades.

Purpose: The goals of this study were to 1) prepare students for long-term academic and career success; and 2) prepare students for the steps they need to take to pursue nursing or healthcare as a career.

Method: In the summer of 2022, in partnership with high schools, local nursing and professional organizations, and University of California Davis Health, we piloted the SHINES program. The SHINES program was a 2-week summer immersive experience where students were exposed to a rich curriculum that provided in-depth insights into the role of nurses, how to navigate academia, and how to prepare a professional portfolio. Our program employed teaching/learning strategies that included active workshops with hands-on stations and simulations. We also engaged in cooperative learning opportunities through small group exercises and group mentoring. By offering academic and professional development to students, we provided guidance and resources to establish a clear attainable path to a career in healthcare. The SHINES program was designed to foster identity formation in the form of confidence, self-efficacy, and a sense of the value they bring.

Assessment of Findings/ Outcome Achieved: We gathered our data using a pre and post-test, weekly session evaluations and an alumni follow-up survey to understand longitudinal outcomes of our program. We used a Cohen's d to establish pre/post effect size (2.10) which indicated there was a large effect size. In other words, students reported a higher mean survey score after attending SHINES. The three survey items with the largest difference in before and after scores were the following, in ranked order: 1) I know the steps that I need to take to pursue a career in healthcare or nursing; 2) I can identify resources that will help me become academically ready to apply for college; 3) I know what nurses do and how their role uniquely benefits patients, families, and communities. The comments students made on the open-ended questions were overwhelmingly positive.

Conclusions: By establishing the impact of workforce development we provide evidence to support legislative funding for such programs and justify for organizations the value of reinvesting in their communities to ensure economic stability and to mitigate the racial wealth gap.

INCLUSIVITY IN LEARNING

Lived Experiences: Parenting Adults with Developmental/Intellectual Disability

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Purposes/Aims: The purpose of this research study is to understand, from a hermeneutic lens, the lived experiences of parents living in New Mexico who continue to care for their adult children with developmental/intellectual disabilities (DD/ID). The three specific aims are: (a) to describe the common meanings and shared practices of parenting an adult with DD/ID; (b) to understand the challenges parents face in their current lives and the resources they use to meet those challenges; and (c) to elucidate the practical advice parents have for others who wish to be supportive of their efforts of parenting an adult with DD/ID.

Background: An estimated 7.4 million people in the U.S. have some DD/ID condition with the parental home as the predominant place of residence. The number of children with DD/ID who are entering adulthood is increasing; more than 75% of this population require that their basic needs be provided by their parents. The prevalence of U.S. parents who continue to care for their adult with DD/ID is more than 3.5 million and an estimated 2.9 million adults with ID/DD live with a parent 55 years of age or older, with at least 25% of this population cared for by a parent 60 years or older. The predominance of aging parents as the source of long-term care seems to lead to discrimination and a lack of appropriate housing, services, and support.

Methods: The methodological approach is a Heideggerian Hermeneutic method using deWitt & Ploeg's framework for rigor. The data analysis was conducted by the researcher and by the Interpretative Research Team using the following: The Hermeneutic Circle process and analyses by members of the Interpretative Research Team. Twenty-two New Mexican parents caring for adult children with developmental/intellectual disabilities were interviewed using semi-structured, open-ended questions and a demographic survey in 2021. The inclusion criteria included English-speaking birth parents living in New Mexico still caring for an adult child over the age of eighteen in their home.

Results: Three relational themes identified: *parenting as unrelenting vigilance, parenting as enduring challenges, and parenting as a bridge between the adult child with DD/ID and others.*

Implications: The parents' narratives revealed implications for future research on parenting of adult children with DD/ID, policy development in the areas of health insurance, guardianship, end-of-life care, and access to more efficient transportation, such as airplanes, in a large geographic state. The narratives also revealed a need for educational opportunities for professionals to study the experiences of elderly parents caring for adult children with DD/ID and to focus on the intersection of disability with race, ethnicity, age, and gender issues. Research is needed about what types of support and services best serve these parents life situations.

Funding: American Holistic Nurses Association 2020 Research Grant. One research grant is awarded each year. No grant number was issues.

Innovative Approach to Evaluate and Address Acute Care Nurse Educational Needs

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Purpose/Aims: To describe an innovative electronic approach for assessing and addressing educational needs of acute care nurses working across numerous specialty areas and roles.

Background: Healthcare is a fast-evolving and dynamic profession requiring specialized knowledge and skill sets. Nurses working in a hospital setting must readily access current evidence supporting best practice through continuing education opportunities. A highly-esteemed Magnet® nursing excellence award, administered by the American Nurse Credentialing Center, requires a regular educational needs assessment to be conducted among all working Registered Nurse (RN) and to provide evidence that patient outcomes improve based on learnings developed from the needs assessment. Yet, nurses report that an imprecise assessment of their specialized learning needs may decrease their motivation to participate in continuing education opportunities offered by their place of employment. Targeted strategies are needed to identify and meet educational needs of acute care nurses by specialty role and practice setting, and research supports that using electronic surveys may increase nursing participation in assessments. In two Magnet®-dedicated hospitals in the Pacific Northwest, the need was identified to efficiently assess RN continuing education needs and inform ways to support nursing knowledge and care across all roles and specialty areas.

Methods/Approach: In late 2021, a nurse professional development specialist partnered with a nurse scientist to create an electronic survey within the Research Electronic Data Capture (REDCAP) platform to capture self-reported, specialized continuing education needs among all caregivers with an RN license. The survey link was distributed through an assigned online learning module (HealthStream). The module contained information on nursing professional practice and the need for continuing education. At the conclusion of the module, the nurse was prompted to click the survey link before receiving credit for completing the module. All caregivers with an RN license were assigned the module and given 8 weeks to complete. Descriptive and frequency statistics were conducted to describe participation rates. Identified education needs were used to prospectively inform new professional development offerings across the hospitals beginning 2022.

Results: A total of 1,966 out of 2,595 eligible nurses (76%) responded to the needs assessment, representing all nursing unit specialties and roles across the two hospitals. Based on the robust responses, several targeted classes were developed. For example, an 8-class program was created and offered to teach assistant nurse managers foundational leadership concepts and efficient use of specific computer applications. Furthermore, educational topics for annual clinical nursing skills fairs were selected by response rates from each specialty area. Registration and attendance at continuing education events supported nursing commitment to learning the content and responses to evaluations validated that presented topics were relevant to the unique areas of nursing practice.

Conclusion: By embedding an electronic continuing educational needs assessment within an assigned online learning platform across two hospitals, nursing participation and representativeness was high. Identifying targeted educational needs of nurses across all specialties and roles helped educators and professional development specialists create and implement targeted, meaningful continuing education courses to support excellent nursing care across all specialties and roles.

Improving Patient Outcomes through an Evidence-Based Practice Nursing Boot Camp

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Purpose: To evaluate the impact of an Evidence-based Practice & Research Bootcamp in improving nursing implementation and completion of evidence-based or research projects and the impact these projects have on patient outcomes.

Background: As the Institute of Medicine purports, the nursing profession has the responsibility to engage its current and future workforce in shaping the quality and safety of health care by, among other key actions, ensuring that nursing care evolves through continuous clinical inquiry, research, and innovation. Also known as clinical scholarship in nursing, this systematic evaluation of a known practice gap, then bridging the gap through application of existing or new knowledge, can be an overwhelming process for a nurse, with few nurses carrying this skillset beyond academia. One way to increase nurse-led projects is to provide a bootcamp that guides the participant throughout the process.

Approach: Beginning in January 2021, two large hospitals in the Portland, Oregon metropolitan area devised an Evidence-based Practice & Research Bootcamp via a synchronous virtual curriculum geared towards nursing. Implementing a mentor-based curriculum over a 6-month period, participants were ushered through a six-part series of topics including: Research methods and evidence-based practice fundamentals, developing a PICOT question, critically appraising the literature, constructing a study design, collecting and analyzing data, and designing professional posters. Throughout these didactic courses, participants were mentored by nursing directors, nurse educators, medical librarians and other past bootcamp participants; all of whom had received preparation through a mentor-specific Evidence-based Practice & Research Bootcamp. At the end of the program participants completed the implementation and evaluation of a project. They also presented a poster at their local hospital and received help submitting abstracts to external conferences.

Outcomes: A total of 26 participants, among two separate annual bootcamps, completed the curriculum in 2021 and 2022. Participant demographics include two with associate degrees, 22 BSN, and two master's prepared nurses spanning eight different specialty areas. All participants were direct care nurses and grouped to form seven projects with four completing (57%) projects within the program timeline. Patient outcomes impacted by projects include: decrease hospital acquired pressure injuries after implementing a turn team; decrease in dilaudid use, heart and respiratory rate in post-operative orthopedic patients after music therapy; and improved door-to-antibiotic time in patients with cancer presenting with neutropenic fever in the emergency department after an evidence-based inter-professional educational intervention.

Conclusions: Providing two annual Evidence-based Practice & Research Bootcamps among two large hospitals has shown to be successful with implementation and completion of projects and improving patient outcomes in the hospital setting. Future steps include evaluating nursing knowledge and confidence in clinical scholarship after completing each class. In addition, evaluating sustainment of nursing and patient outcomes stemming from participant-led projects would further highlight the impact.

Certification Champion Pilot Project to Increase RN Specialty Certification Rates

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Purpose: To assess whether a Certification Champion increased Maternal Newborn Nursing certification rates in a Mother Baby Unit (MBU) of a 450-bed community hospital.

Background: AACN defines specialty certification as a designation of competency associated with improved patient outcomes and increased nurse satisfaction and retention. Our hospital also offers financial incentives for certification, however in January 2022 only 20% of mother baby unit (MBU) RNs were certified. A survey demonstrated the top reason was "not knowing where to begin." A guidebook was created to help but was not utilized. In response, the MBU Unit Practice Council piloted a Certification Champion Program to increase certification rates.

Approach: In March of 2022 a Clinical Nurse Leader (CNL) was selected as the Certification Champion. The CNL utilized the clinical microsystem framework to develop and implement the pilot project, focusing on improving unit-level structures and processes rather than individual RN motivation. Actions included the identification of a preparation course for RNs to take with tuition reimbursement and the implementation of a peer support plan. A Champion designed informational flyer was distributed on the unit and the Champion rounded with RNs during day and night shifts to create program awareness. During certification preparation, the Certification Champion organized group texts providing guidance and encouragement. The program occurred from April 2022 to October 2022. After program completion, a 7-question survey was administered soliciting feedback on areas of value in the program.

Findings: 10 RNs participated in the program (30% of eligible unit nurses). All 10 attended the prep course. 9/10 (90%) signed up to take the exam and all 9 passed the exam for a 100% pass rate, increasing unit certification rate to 40%. 100% of participants completed the program feedback survey, with the highest ranking items (on a scale of 1-5 with 5 being highest rank) being “help with signing up for test” (ave = 4.8), “help with signing up for Webinar” (ave = 4.4) , and “having Webinar to help you prepare for test” (ave = 4.4.) This was followed by “going through the process as a group” (ave=4.3), and “having group text support for questions/problems” (ave=4.3). Items perceived to have lower value included “online study resources from library” (ave= 3.0) and "books to help prepare for test” (ave = 4.1). Verbal feedback included appreciation of technical assistance provided in locating and signing up for the prep course and exam, and completing financial reimbursement documentation. Additionally, the group felt strongly about having peer support via texts, where encouragement and celebration were shared.

Conclusions: The Certification Champion doubled unit-level RN certification rates from 20 to 40% in 7 months. The finding that technical and emotional support, rather than assistance with exam content or studying, was of higher value to participants, provided valuable information which is currently being used to adapt and scale the program to other hospital units to increase certification rates and positively impact both patient and nurse outcomes.

ISSUES IN PRACTICE

A Longitudinal Study of Nursing Perceptions of EMR Quality and Satisfaction with the EMR

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Purpose: Describe nursing perception of electronic medical record (EMR) quality and satisfaction in an academic hospital longitudinally following a virtual implementation of a new EMR.

Background: There is a wide assortment of published literature linking physician satisfaction and burnout rates to the documentation burden of the EMR; however, there is a paucity of literature describing the EMR impact on nursing burnout and satisfaction. In addition, the COVID-19 pandemic has fundamentally changed the amount of at-the-elbow support available for nurses during major system implementations as analyst support is predominately virtual; the impact of this remains undocumented in the literature. The purpose of this project was to describe nursing perceptions of EMR quality and nursing satisfaction longitudinally throughout a virtual EMR implementation and stabilization phase to identify targeted opportunities for improvement in EMR quality and satisfaction amongst nursing staff.

Approach: A quality improvement project was initiated to evaluate nursing EMR satisfaction and quality. A literature search identified a nursing-focused questionnaire published by Otieno et. al, 2007 that measures EMR use, quality, and satisfaction from the nursing perspective. The nursing informatics department at the hospital reviewed the tool and confirmed content validity and recommended including a series of demographics questions with tool. This allowed for data stratification by job tenure, nursing role, nursing unit, and age.

Methods: The survey was built in REDCap and disseminated via email to all 2,000 nursing staff 2 months post-implementation, and every subsequent 6 months for three more occurrences. A descriptive statistical analysis of two survey questions was performed. For quality, the question reviewed was "I feel the safety of patients has improved due to the EMR" and the satisfaction question was "Overall, I am satisfied with the EMR system".

Findings: From implementation until 20 months after go-live, overall, nurses reported a 9% decrease in their perception of patient safety as a result of the EMR (p-value <0.0001) and a 32% decrease in satisfaction with the EMR (p-value <0.0001). Stratification of quality and satisfaction data by unit reveals unique differences by work area, with inpatient acute care, inpatient critical care, perioperative services, and ambulatory care reporting the highest perception of quality and satisfaction from go live to 20 months post, whereas radiology and the emergency room nurses had the lowest perception of quality and satisfaction.

Conclusion: The results of this survey indicate that nursing perception of EMR quality and nursing satisfaction with the EMR did not return to baseline 20 months after EMR implementation. In addition, the data indicates that there are unique differences in quality and satisfaction data by individual work unit. Therefore, the results can be utilized to develop targeted quality and satisfaction interventions for the nursing staff that are specific to the needs of each unit. Future data collection could facilitate understanding of how unit specific interventions improved quality and satisfaction with the EMR from the nursing perspective.

Funding: Research was funded by a Nursing Research Grant from the Seattle Children's Center for Pediatric Nursing Research

Infusion Nurses' Personal Protective Equipment Use While Handling Chemotherapy Drugs

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Purpose: To describe perceived barriers, perceived risks, interpersonal influence (modeling and norms), perceived conflict of interest, and organizational influences and select demographics related to Personal Protective Equipment (PPE) use for out-patient, oncology infusion nurses.
Background: The proper use of PPE should be common practice among nurses who administer chemotherapy. However, despite training and education, many studies have demonstrated that infusion nurses' PPE adherence is as low as 50%. Improper PPE use can increase exposure to chemotherapy and has potential adverse health effects including fertility issues and risks of cancer. Few studies have examined if certain nurse demographics impact proper PPE use.
Methods: This descriptive correlational, cross sectional research design used purposeful sampling to recruit infusion nurses from 4 clinic sites. In June and July 2022, infusion nurses received a one-time survey consisting of the valid and reliable Revised Hazardous Drug Handling Questionnaire (51 questions) and 12 demographic questions; data was captured in REDCap. The 5 subcategories included 1) perceived barriers, 2) perceived risks, 3) interpersonal influence of modeling and norms, 4) perceived conflict of interest, and 5) organizational influences with scales ranging from (1 = strongly disagree to 5 = strongly agree). Pearson r correlations was done using SPSS version 26.
Results: Out of the possible 56 nurses, 32 responded (57%). Statistically significant correlations between demographics and subcategories included nurses age and interpersonal influences of norms (r = .552; p < .001) and organizational influences (r =.419; p < .05.); years of total nursing experience and interpersonal influences of norms (r = .617; p < .001), modeling (r = .412; p < .05), and organizational influences (r =422; p < .05). The years of oncology nursing experience only correlated with interpersonal influences of norms (r = .435; p < .05). Larger patient caseload correlated with perceived barriers (.428; p < .05) and conflict of interest (r = .416; p < .05) with negative correlation to organizational influences (r = -.418; p < .05). PPE adherence is low with 62% of participants agreeing or strongly agreeing that "others around me don't use PPE". Most nurses did not use PPE because they were uncomfortable (55%) or too hot (71%). Knowledge gap of adverse health risks were identified when 26% felt that they were "not worried about future negative health effects from chemotherapy exposure." Also, 34% of the nurses felt that "wearing PPE makes my patients worry" and 21% felt that it made patients "feel uncomfortable."
Implications: This study found higher PPE non-compliance (62%) compared to previous literature (50%). Nurse age (younger), years of experience (fewer), and caseload (higher) increased risky PPE behavior. PPE education targeting perceived barriers, and the impact of modeling appropriate behaviors should be reinforced to both nurses and patients. Organizational influences of workplace safety climate could be improved with collaboration of more experienced nurses. Future research should include a multifaceted approach addressing the PPE itself, the infusion clinics culture and acceptability, and nurse knowledge.

Challenges to Immigrant in a New Destination: The Social Ecological Framework

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Purpose: The purpose of this study is to understand the challenges faced by immigrants in a new immigrant destination in the southwest Montana using the Socio Ecological Model (SEM) framework.

Background: The rural intermountain west is a new immigrant destination that lacks the infrastructure required to support growing immigrant populations. New immigrant populations face many challenges and barriers in new immigrant destinations including a lack of language interpretation services, access to basic healthcare services, and access to community resources.

Methods: In this qualitative study, we conducted 30 semi-structured interviews with two groups of respondents: key informants and immigrants. Data were analyzed using content-based thematic analysis and categorized based on the SEM framework.

Results: Themes identified at the individual and interpersonal levels of the SEM include language barriers, fear of deportation, and stress. Themes identified at the community level include cultural differences, discrimination, and a lack of exposure to immigrants. At the system level, themes were cost of healthcare, a lack of interpretive services, and housing. At the policy level, researchers identified themes including legal authorization and occupational exploitation.

Conclusions: Understanding the challenges faced by immigrants requires a multi-leveled approach and multi-level interventions to address barriers. Policies that are inclusive and welcoming will help immigrants acculturate, access community and health resources, and feel a sense of belonging in a new immigrant destination.

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Experiences of Pregnant Migrants at the U.S.' Southern Border, 2017-2022

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Purpose: The purpose of this study was to understand and contextualize the experience of pregnant migrants arriving at the U.S.' southern border.

Background: The migration of women and families to the United States has steadily increased over the last decade. At the same time, the last five years have seen dramatic shifts in U.S. immigration policy with significant potential impacts on pregnant migrants and migrant families. In late 2017, the Trump administration began detaining more pregnant migrants than any previous administration. In 2018 detentions of pregnant people in ICE detention facilities rose to an all-time high of 2,097. From January 2015 to April 2019, ICE received over 100 complaints about its treatment of detained pregnant people; the most dramatic cases have involved stillbirths, miscarriages, and live births without medical attention. In 2019, the Trump administration began requiring most asylum-seekers to await their hearings in Mexico, excluding them from entry into the U.S. under the "Migrant Protection Protocols" (MPP) program. In 2020, the Border Patrol began rapidly expelling most migrants who crossed the border under the pandemic-related "Title 42" rule. In 2021, the Biden administration announced that it would stop detaining most pregnant or lactating migrants; data on the implementation of this policy is lacking. There have been no studies published to date on the impact of Trump- and Biden-era immigration policy changes on pregnant migrants.

Methods: This study used feminist critical ethnography as a methodological framework for conducting qualitative interviews with formerly detained migrant women who were pregnant while detained, as well as people who provide services to this population, including healthcare workers, migrant shelter workers, and legal advocates. Data collection began in the spring of 2021 and concluded in the spring of 2022. Study interviews, informed by Latinx feminist interviewing methods such as *plática* and *testimonio*, were conducted remotely due to the COVID-19 pandemic

Assessment of Findings: Several key themes emerged during data analysis, including:

- Dangerous Journeys, Dangerous Crossings
- Pregnancy Entangled with Every Stage of Journey
- Poor Detention Conditions and Medical Neglect
- MPP/Title 42 Era: Returned to Harm in Northern Mexico
- Family Separation
- Healthcare Worker Moral Distress
- Making Meaning of the Experience: Fear, Gratitude, Doing It for the Baby/*Aguantar*

Conclusion/Implications: This study's findings suggest that US immigration policy, including Prevention Through Deterrence strategies, MPP, and Title 42, have uniquely negative effects on pregnant migrating people, given their specific vulnerabilities. Considering the work of feminist scholars of color in the U.S.-based reproductive justice movement, the impact of U.S. immigration enforcement on pregnant people amounts to reproductive oppression. In addition, healthcare workers interviewed for this study expressed significant moral distress about their experiences caring for pregnant people in immigration custody, an unanticipated finding. Nurses and other health care workers should advocate for policy changes that would decrease the negative impact of immigration enforcement on pregnant people, infants, and families, including ending the MPP and Title 42 programs, limiting the detention and deportation of pregnant people and parents, limiting family separation, and empowering healthcare workers to advocate for patients in immigration custody.

MIGRANT AND IMMIGRANT HEALTH

“Because We Are Afraid”: Voices of the Undocumented in a New Immigrant Destination

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Purpose: The purpose of this qualitative study was to explore the perceptions of immigrants about the policies and barriers surrounding documentation status that impact access to routine and emergency medical care, equitable employment opportunities, and proper licensure.

Background: In new immigrant destinations, policies prohibiting undocumented immigrants from accessing services may hinder integration. Exclusionary or criminalizing immigration state policies may make undocumented immigrants hesitant to utilize the health care system.

Methods: Using snowball sampling, we recruited a sample of Latino immigrants living and working in southwest Montana. Semi-structured interviews were conducted in Spanish, and data were analyzed for themes using conventional content analysis.

Results: We conducted interviews with 30 immigrants (19 men and 11 women) and identified themes centering around immigrants’ inability to access healthcare, obtain driver’s licenses, challenges related to employment, and the desire to make a life in Montana. Permeating all of these topics was the theme of fear.

Conclusions: The lack of documentation presents complex economic, health, and social challenges that prevent immigrants from fully integrating into a new community. These are exacerbated in states such as Montana that employ anti-immigrant public policies. As rural Western states continue to experience growth in immigrant populations, it is critical that public policies be developed and adapted to support integration and equitable access to necessary health and social services.

Intimate Partner Violence, Health, Inflammation, and Resiliency in Latinx Immigrants

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Purposes/Aims: This study had four aims: 1) To test links between IPV and the physical and mental health of Latinx immigrants. 2) To test links between IPV and systemic inflammatory dysregulation. 3) To examine whether systemic inflammatory dysregulation mediated the link between IPV and health. 4) To examine whether individual, familial, or community sources of resilience buffered against the effect of IPV on health.

Rationale/Background: Latinx immigrants are vulnerable to more severe intimate partner violence (IPV) and experience worse physical and mental health than other racial and ethnic groups. The driving factors of the effects of IPV on the health of Latinx immigrants are unknown. One possibility is that IPV may be a chronic stressor contributing to systemic inflammatory dysregulation. Latinx immigrants also have sources of resilience that might protect against the adverse health effects of IPV, but these effects have not been widely studied.

Method: This cross-sectional study was a secondary analysis of a baseline assessment of 391 adult Latinx immigrants in a longitudinal SER [Salud (Health), Estrés (Stress), y Resiliencia (Resiliency)] Hispano study. Participants were primarily female (69%), with an average age of 34 years. Most (65%) reported IPV in the past six months on the Conflict Tactics Scale. We assessed participant health with four domains, depression (PHQ-9), anxiety (GAD-7), and overall physical and mental health (PROMIS scales). Systemic inflammatory dysregulation was measured with six stress biomarkers (interleukins-6, -8, -10, and -18 and C-reactive protein) for systemic inflammation and (F2-isoprostanes) for oxidative stress. We assessed multiple potential sources of resilience, including individual Resilience (Resiliency Scale), Active and substance use coping (Brief COPE), Ethnic Pride (MEIM), familism (Familism Scale), and emotional and instrumental social support (Adult Social Relationship Scale). A series of regressions were used to test whether IPV was related to health or systemic inflammatory dysregulation. Mediation and moderation were tested with Hayes' PROCESS for SPSS. All analyses controlled for adverse childhood experiences, sex, age, education, employment, and monthly income.

Assessment of Findings/Outcomes Achieved: IPV was significantly related to overall physical health ($R^2 = .12$, $p <.001$), overall mental health ($R^2 = .17$, $p <.001$), depression ($R^2 = .27$, $p <.001$), and anxiety ($R^2 = .20$, $p <.001$), but not to systemic inflammatory dysregulation. Mediation was insignificant for systemic inflammatory dysregulation as a link between IPV and health. Predictive associations between physical health and IPV were moderated by individual resilience ($R^2 = .011$, $p = .049$), active coping ($R^2 = .015$, $p = .202$), substance use coping ($R^2 = .013$, $p = .0324$), and emotional social support ($R^2 = .012$, $p = .0369$). There were no predictive associations between mental health and IPV moderated by resilience.

Conclusions: Physical and mental health of Latinx immigrants is influenced by IPV, yet systemic inflammatory dysregulation is not. Healthcare providers should be aware of worse health for Latinx immigrants experiencing IPV and provide trauma-informed care. Multiple sources of resiliency moderate the link between physical health and IPV. Future research should examine interventions to improve resiliency in the Latinx immigrant population.

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Factors Influencing the Self-Reported Palliative Care Practices of Acute Care Nurses

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Purpose: Using a comprehensive, multi-dimensional approach, this study investigated the influencing factors that affect the nature and frequency of palliative care (PC) practices of acute care nurses in the hospital setting.

Background: Despite evidence indicating the benefits of PC, timely referrals and provision of PC in acute care settings are significantly lagging behind the current need. All nurses can incorporate PC-focused practices such as comprehensive pain and symptom management, emotional and spiritual support, and enhanced communication into their bedside practice, regardless of specialty or setting, and early integrated PC leads to better patient/family-related outcomes (quality of life, family satisfaction, symptom burden) and improved cost and efficiency outcomes. The common investigative approach in studies examining PC practices has been to examine influencing factors in isolation, excluding relationships to other potential factors or to the organizational structure, lacking a contextual perspective that more accurately reflects the clinical practice environment.

Methods: A descriptive, cross-sectional design, guided by Bandura's Social Cognitive Theory, was used to examine the effects of ***nurses' personal factors*** (palliative and end of life [EOL] care knowledge, self-efficacy, palliative and EOL care education, attitudes toward care of the dying), and ***environmental factors*** (nurse-perceived patient/family barriers and institutional/unit factors) on nurses' PC practices in the acute care setting. Registered nurses a western state (N = 325) completed an electronic survey including a demographic questionnaire and six other measures (UNPCKS, CARES-PC, FATCOD, Institutional/unit factors subscale, Patient and family barriers subscale, and PCPS-E). Hierarchical multiple linear regression analysis was used to evaluate the degree to which each set of independent variables explained the variance in self-reported frequency of PC practices of acute care nurses while controlling for the others.

Assessment of Findings: The final statistical model explained 32.1% of the variance in frequency of PC practices, with personal factors contributing most significantly. Specifically, nurses' self-efficacy and attitudes toward care of the dying were the most significant individual predictors. Step one (demographics) explained 12.3% of the variance (F(7, 245) = 4.916, p < .001). Step two (personal factors) explained 19.4% (F(5, 240)= 13.678, p < .001). Step three (environmental factors) explained 0.4% [F(2, 238)= 9.053, p = .519]. The final regression model with demographics, personal factors, and environmental factors, accounted for 32.1% of the variance in the frequency of nurses' self-reported PC practices and was significant [F(14, 238) = 8.050, p < .001].

Conclusions and Implications: This study advanced our knowledge regarding the factors that influence PC practices of acute care nurses and indicated that while organizational and environmental factors (i.e. unit structure, availability of a PC team) could be an area for improvement, efforts directed toward modifiable personal factors, particularly self-efficacy and attitudes toward care of the dying, are imperative as they were the most significant predictors of behavior. Ongoing PC education, opportunities for experiential learning, and unit-level mentorship by PC champions could improve self-efficacy and attitudes. Additionally, further research into what affects nurses' personal factors, such as self-efficacy, attitudes, and knowledge, could inform meaningful initiatives directed to fostering those positive personal factors.

Palliative Care Referral Time and Healthcare Utilization for Advanced Cancer Patients

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Background: Despite lung, colon, and rectal cancer being the leading and third leading cause of cancer-related death among both men and women respectively, few studies have examined Palliative Care Consultation (PCC) on healthcare utilization (HCU) in individuals with advanced stage diagnosis in this disease cohort. Extant research shows advanced stage cancer patients receive aggressive treatments within the last 30 days of life. Palliative care is linked to less aggressive cancer treatment, and palliative interventions applied early, at diagnosis of advanced cancer, are more favorable for improving symptom and disease management. Patients and family members with early PCC are better informed about treatment directives and end-of-life decisions. The American Nurses Association (ANA, 2017) recommends discussions of PC begin at diagnosis of a chronic illness; American Society for Clinical Oncology (ASCO, 2012) guidelines recommend PCR within 8 weeks of advanced cancer diagnosis.

Purpose: The purpose of this study was to examine the relationship among select socio-demographics, participant clinical characteristics, PCC time, healthcare utilization, and PCC to death for patients with PCC compared to no PCC, in a cancer patient cohort at an advanced stage in their disease process.

Methods: Descriptive correlational design using retrospective EHR data collected within the calendar year 2019-2020.

Results: Bronchus/lung cancer accounted for 74.7% (*n* = 71); colon, rectosigmoid junction accounted for 25.3% (*n* = 24). Eighty percent (n = 76) of the participants had been diagnosed with stage IV and 20% (n = 19) stage III cancer. The average number of days from first PCC to death was 10 days, inferring that PC was being utilized as hospice. Participants with stage IV diagnosis had less days from diagnosis to death. For patients with PCC, time from diagnosis to death was 445 days (*n* = 85), compared to 320 days for those with no PCC (*n* = 10). Participants who were White had more days from diagnosis to death, compared to those who were Hispanic or "other race." White participants were also more likely to get PCC. Overall, average number of ED, hospital, and clinic visits during the study period (3.72 visits) was reduced after PCC (0.16 visits); average acute care LOS(6.97 days) was reduced after PCC (0.76 days); and average ICU LOS for the study period (4.55 days) was reduced after PCC (0.51 days). None of the participants got PCC at the recommended time; at diagnosis or within 8 weeks of diagnosis.

Implications for Nursing Research: All Clinicians who care for patients with chronic illnesses need to become more confident in having PC discussions with patients. State regulatory agencies can ensure this by requiring mandatory inclusion of PC and EOL courses in nursing and medical curriculum. To ensure timely referrals and consults, health systems should implement a referral criterion for patients with advanced cancer diagnosis to automate a trigger system in EHR; this will ensure PCR and PCC is initiated outside of physician discretion, and solely based on patient need, to remove the possibility of inequity in the referral process.

Technology Enhanced Connectedness: Social Isolation and Older Adult Health

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Aims: The aim of this study was to report the prevalence of older adult social isolation and explore the mediating role of technologically enhanced connectedness between the social isolation of older adults and self-reported health. Specifically, the mediating effects of email/text use and internet/social network site use were examined.

Background: Ample research suggests social isolation is inversely associated with positive health outcomes for older adults. The Convoy Model of social relationships is a life-course social support model that gives frame to understanding the protective features connectedness may provide older adult health. It is unclear in the research literature the extent to which digital connections can substitute for face-to-face connections in protecting against adverse health outcomes associated with social isolation. The role of social technologies in the association between social isolation and health over time is inconsistent in research reports.

Methods: This study is a longitudinal secondary analysis of data from rounds/years eight and nine of the National Health and Aging Trends Study (NHATS), a nationally representative sample of Medicare beneficiaries (round eight *n* = 5,147). The data were collected with in-person annual interviews conducted by trained interviewers. Social connectedness versus social isolation was operationalized as a domain-inclusive construct based upon the Social Network Index (SNI). Health one year later was self-reported as excellent/very good versus good/fair/poor. A sequence of logistic regression models, adjusted for important sociodemographic confounding variables, were employed to examine the mediating role of email/text use and internet/social network site use on the associations between social isolation and health.

Findings: In round/year eight data, participant average age was between 75-79 years and 59% were female. The prevalence of social isolation in this sample was 25%. For the round/year nine data, self-reported general health was: 5% poor; 18% fair; 33% good; 26% very good; and 8% excellent. As expected, social connectedness at round eight was associated as a direct path predictor with health at round nine (*AOR* = 0.45; *CI* = 0.38–0.54). Variations in social connectedness predicted variations in mediator email/text use (*OR* = 3.16; *CI* = 2.60–3.84) but not mediator internet/social network site use (*OR* = 1.25; *CI* = 0.93–1.68). In the final indirect path equation, social connectedness (*AOR* = 0.45; *CI* = 0.37–0.56) and email/text (*OR* = 0.71; *CI* = 0.56–0.95) were independently associated with health. However, email text did not mediate the relationship between social connectedness and health.

Implications: In this study both social connectedness and email/text were positively predictive of health one year later. Email/text use may be seen as more immediate and interactive connection to others, and this participation may explain the effects on health. In contrast, the use of internet/social network sites offers less direct connection to others, and this may explain its lack of association with health. Email/text may offer opportunities for interventions to improve social connectedness. Further, research is needed to understand the pathways and mechanisms through which technology enhanced connectedness and participation is associated with health.

PERSPECTIVES IN AGING CARE

Wearable Internet of Things Methodology to Measure Behavioral Intervention Outcomes

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Background: Dementia caregiver research has used self-report outcomes (e.g., stress, burden and depression) which are subjective responses. The use of Wearable Internet of Things (WIOT), a combination of Smartwatch-Smartphone-Cloud, can provide objective measures of behaviors and physiological responses demonstrating evidence of change made over time and associated with a unique intervention. Wearable devices are rapidly emerging and forming a new segment due to their capability of sensing, computing and communication. WIOT has shown great promise in transforming the healthcare sector, wherein individuals are seamlessly tracked by wearable sensors for personalized health and wellness information—vital body parameters, physical activity, and other critical measures impacting quality of daily life. WIOT devices (e.g., smart watches) can track several physiological and behavioral parameters that are tightly linked to health, well-being, and lifestyle. For instance, stress can be monitored through analyzing heart rate, heart rate variability, and respiration rate, while activity and sleep can be monitored through analyzing different movements and the body's physiological reactions to those movements. Leveraging this technology, we intended to measure changes that are the result of our intervention objectively and ubiquitously.
Purpose: to examine the effect of a 4-week behavioral intervention (i.e., caregiving education and mindfulness) on stress of caregivers who provided the around-the-clock care for persons with dementia (PWD) at home.
Methods: The study used one-arm behavioral intervention design monitoring stress using WIOT device for a month among informal primary caregivers for community dwelling persons with dementia. The behavioral intervention included weekly home visits to educate mindfulness technique (i.e., breathing exercise) and caregiving skills for 4 weeks. Participants recruited from ethnic communities in California were asked to wear a smartwatch for a month to monitor their physiological outcomes (e.g., heart rate, heart rate variability – HRV, sleep, activity). We used the Generalized Estimation Equation (GEE) model to analyze the relationships between stress and other demographic and physiological variables, the impact of intervention among caregivers.
Results: A total of 30 caregivers showed adherence of wearing WIOT device for 4 weeks; Mean age 62.17 (SD=14.95) years, Females = 27 of 30, 90%, Spousal relationship with PWD = 18 of 30, 60%). All participants were insured. PWD's stage of dementia were mild to moderate. Approximately 27 percent of PWDs were Medicaid beneficiary indicating low-income status. The GEE model showed intervention effect on reduction of stress (i.e., HRV) overtime (Coefficient Beta (standard error)=-.162 (0.057), p-value=0.004): Other variables that showed significant associations to improve the caregiver's stress included daily steps (beta =-0.042 (0.007), P<.001) and education (i.e., high school and/or college education) (beta=-.075 (0.043), P=0.084 indicating a trend of improvement). Sleep variables (e.g., light or deep sleep) did not show significant improvement of caregiver's stress.
Conclusions: Findings based on objective measures on stress through WIOT technology showed that behavioral intervention (i.e., mindfulness and language specific in-person caregiving education) improved diverse ethnic caregivers' stress on caring for community dwelling PWDs overtime. A larger scale intervention using WIOT measures should be conducted to see further effect on stress among diverse ethnic caregivers.

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Feasibility of the Home Intervention Promoting Well-Being Among ADRD Caregivers

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Purpose: The purpose of this research was to assess the feasibility and promise of a new intervention, Honoring Our Memories (HOME), in promoting well-being among older family caregivers of people with Alzheimer Disease and related dementias (ADRD) in a community setting.

Background: By 2060, the number of adults in the U.S. aged 65 and older living with ADRD is projected to increase by 128%. The home is the nexus for ADRD care; family caregivers are an essential resource, providing for the care recipient to remain at home from diagnosis to end-of-life. Community-based intervention supporting ADRD family caregivers to sustain their well-being is a national imperative. ADRD family caregiver intervention research is primarily derived from the stress and coping paradigm, evaluating approaches to manage threat and reduce burden in the context of caregiving demands. Approaches to ADRD family caregiving intervention are needed which move beyond managing threat, test novel theoretical perspectives specifying theory-based critical content and mechanisms of action, and promote sustained well-being. The HOME Intervention was developed from a neurovisceral integration perspective, in which eliciting memories of warmth and safety sustain well-being in the context of self and relationships. Memories of warmth and safety are associated with better self-rated health, and increased emotional and social well-being. Eliciting memories of warmth and safety has implications for sustained well-being, however, this approach has not been integrated into evidence-based ADRD caregiving interventions.

Methods: In this NIH Stage 1b research, we assessed the feasibility and promise of HOME, a 6-week intervention eliciting memories of warmth and safety, using a nonrandomized within-subjects pre-post design with older ADRD family caregivers. Feasibility was evaluated as acceptability (enjoyment, ease of use, timing, referral, Narrative Evaluation of Intervention Interview (NEII), demand (eligibility, recruitment, retention), fidelity in delivery (interventionist training, intervention delivery, intervention receipt), and change in outcomes of well-being (perceived well-being, self-knowledge).

Findings: Participants (N=5) were aged 68-85 (M=76.2, SD 7.2), the majority were female, non-Hispanic white, caring for a spouse. Acceptability mean ratings were ≥ 80%. NEII qualitative data characterized participation in HOME as very positive. All caregivers expressing interest were eligible. Retention was 100%. Interventionist training documented skill acquisition to performance criterion. Fidelity in delivery showed little deviation from critical content (M=2.7, SD 2.0); audiotaped intervention sessions > 80% delivered as planned. Intervention receipt confirmed memories of warmth and safety as strongly experienced (M=4.9, SD 1.3). No adverse events were reported. The majority of participants improved in self-knowledge (d=2.0) and total well-being (d = 0.30). The greatest mean increases in well-being subscales occurred for purpose in life (d = 0.38), environmental mastery (d = 0.37), and positive relations with others (d = 0.33).

Conclusions: This research supports the feasibility and promise of the HOME Intervention and the key elements needed for programmatic research assessing the efficacy of the HOME Intervention in an NIH Stage 2 behavioral clinical trial.

Feasibility and Effects of Aerobic Exercise on Blood Biomarkers of Alzheimer’s Disease

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Background: Strong evidence has accumulated linking physical activity to reduced risk for Alzheimer’s disease (AD). Randomized controlled trials (RCTs) showed that aerobic exercise interventions produced modest-to-moderate cognitive benefits. However, the mechanisms of aerobic exercise in AD pathogenesis remains unknown. The purpose of this pilot study was to examine the preliminary effects of 6-month aerobic exercise on plasma amyloid-$\beta_{42/40}$ ($A\beta_{42/40}$) ratio, phosphorylated tau (p-tau) 181, and total tau (t-tau) in older adults with mild-to-moderate AD dementia.

Methods: This pilot study was an ancillary study of the FIT-AD Trial that tested the effects of 6-month aerobic exercise on cognition and imaging biomarkers in older adults with mild-to-moderate AD dementia. The FIT-AD Trial was a 2-parallel group, single-blinded RCT, randomized 96 participants on a 2:1 allocation ratio to moderate-intensity cycling or low-intensity stretching for 20-50 minutes, 3 times/week for 6 months, and followed participants for another 6 months. This blood ancillary study enrolled 26 FIT-AD participants and collected fasting blood samples at baseline, 3 and 6 months. Simoa™ assays were used to analyze plasma $A\beta_{42}$, $A\beta_{40}$, p-tau181, and t-tau. Intention-to-treat, Cohen’s d, and linear mixed models were used for data analyses.

Results: Of the 34 participants who responded to our recruitment, 26 were enrolled, a recruitment rate of 76.5%. The retention rate was 88.5% and 96.2% at 3 and 6 months, respectively. The average age of the study sample was 77.58±6.99 years old with 15.44±3.00 years of education and 65.4% male. About 96.2% carried an *APOE* e4 allele. Means (standard deviation) of within-group difference from baseline to 6 months for the stretching and cycling group were 0.001 (0.012) and -0.001(0.010) for $A\beta_{42/40}$ ratio, 0.609 (1.417) pg/mL and 0.101(1.579) pg/mL for p-tau181, and -0.020 (0.279) pg/mL and -0.075 (0.215) pg/mL for t-tau. Effect sizes were observed in within-group difference from baseline to 6 months for p-tau181 in the stretching group (d=0.43 [-0.33, 1.19]) and t-tau in the cycling group (-0.35 [-0.87, 0.17]). Means (standard deviation) of between-group difference from baseline to 6 months were 0.000 (0.010) for $A\beta_{42/40}$ ratio, 0.663 (1.648) pg/mL for p-tau181, and 0.135 (0.256) pg/mL for t-tau, favoring the cycling group. Unadjusted between-group effect sizes from baseline to 6 months were moderate for p-tau181 (d=.40 [-.65, 1.45]) and t-tau (d=.53 [-.40, 1.46]). These between-group effect sizes for p-tau181 and t-tau decreased to 0.29 and 0.15, respectively, after adjusting for their baseline levels.

Conclusions: Fasting blood collections were acceptable to participants and feasible as demonstrated by high recruitment rate and retention. Exercise may potentially modify plasma biomarkers of AD. Our study provided preliminary effect size data to inform future trials.

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PERSPECTIVES IN AGING CARE

Meditation and Compassionate Love: Impact on Psychological Well-Being in Later Life

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Background & Significance: Meditation is used as a coping resource to mitigate the adverse influences of stressful life situations on mental health. However, the mechanisms underlying how meditation helps in coping with such adversity are not well understood. In particular, scant research attention has been given to compassionate love as a potential mechanism that can mediate the impact of meditation on psychological well-being. Such research is warranted considering previous findings that people who meditate experience greater compassion and positive emotions.

Purpose: This study uses Fredrickson's broaden-and-build theory of positive emotions to examine the mediating influence of compassionate love on the relationship between meditative practice and psychological well-being.

Methods: Using data from our nationwide web-based survey (n=1,861), we evaluated whether compassionate love mediates the relationship between the use of meditation and psychological wellbeing (depressive symptoms measured with 10-item Center for Epidemiologic Studies Depression scale and anxiety measured with 6-item PROMIS Emotional Distress-Anxiety Scale).

Results: After controlling for demographic and health variables, estimates from an ordinary least squares regression (OLS) model suggest that older adults who used meditation (compared to those who do not) had significantly higher feelings of being loved ($b = 0.11$, $p<0.05$) and those who experience more love has lower symptoms of depression ($b = -2.10$, $p<0.001$) and anxiety ($b = -0.99$, $p<0.001$). Compassionate love significantly mediated the effect of the use of meditation on depressive symptoms ($b = -0.23$, $p<0.05$) and anxiety ($b = -0.11$, $p<.05$).

Conclusion/Implications: Our findings underscore the need to design contemplative interventions that foster compassionate love to enhance psychological well-being among older adults.

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Health and Well-Being through the Lens of Native Hawaiian Kūpuna (Elders)

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Purpose/Aims: To describe the 'key to living well' related to the health and well-being of Native Hawaiian kūpuna (elders) in Hawaiʻi. This research is part of a larger study to explore the nutrition and dietary habits of Native Hawaiian kūpuna.
Rationale/Background: Hawaiʻi residents experience the greatest longevity in the U.S. However, the indigenous Native Hawaiians have the shortest life expectancy of any racial group in the State, and their life expectancy is similar to African Americans living in the US. Native Hawaiians are impacted with high rates of diabetes, heart disease, and obesity. The literature has focused on these social and health disparities that plague Native Hawaiians, and this has reinforced a negative view of Native Hawaiians ability to self-care for themselves in their own land. Despite this, there are Native Hawaiian kūpuna 65 years and older in Hawaiʻi who are living beyond the predicted life expectancy. They are experiencing life beyond 65 and are thriving. The Native Hawaiian kūpuna are the keepers of wisdom and the light to lead the indigenous population into positive cultural identity and strength This presentation begins to share the Native Hawaiian kūpuna's wisdom and voice in describing the 'key to living well'.
Methods: The study design was a focused ethnographic approach. Sample included 21 Native Hawaiian kūpuna, 65-88 years of age, comprised of 13 females and eight males. Data was collected via observations, field notes, and face-to-face interviews. Descriptive statistics and thematic analysis were utilized.
Results: Thematic analysis of the category 'key to living well' had eight sub-categories. From the face-to-face interviews, participants shared quotes. A few quotes were: (1) acceptance "to love and be loved is key to living well", (2) decrease stress, (3) faith, "In my belief, God is number one, others are number two, and I am number three", (4) holistic view of living well, (5) resilience, (6) sense of independence, and (7) thinking positive, "It's your mindset. You got to have your mind on that goal to be healthy", and (8) thriving, "The key to living well is to eat healthy and take care of yourself. Get enough sleep, enjoy life and live it to the best that you know how". The findings were consistent with what was found in the literature and paralleled the "Blue Zone" studies. Native Hawaiian kūpuna emphasized having balance in all aspects of life: physical, mental, emotional, psychological, spiritual with viewing oneself as a 'whole person'.
Conclusion/Implications: The findings from the thematic analysis conducted with emphasis on the category 'key to living well', highlighted aspects of healthy aging and a thriving lifestyle of Native Hawaiian kūpuna. Implications focused on possible interventions to support and encourage health and well-being with incorporating the 'key to living well' for other Native Hawaiian kūpuna and their families is an essential component. Education through providing teachings and examples from kūpuna who are thriving in the present may be empowering for Native Hawaiians.

Feasibility of Assessing Diurnal Salivary Cortisol Rhythm within Foster Families

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Purposes/Aims: To explore the feasibility of collecting and analyzing an objective biomarker (salivary cortisol) to track diurnal cortisol rhythms (DCR) associated with stress within the foster family population. The research question was: At what rate will foster family dyads (one adult caregiver and one child) successfully collect, store, and ship salivary cortisol samples when participating in a behavioral intervention? Additionally, we sought to determine if the passive drool technique for saliva collection was acceptable when including a child in the collection process. Data was analyzed within the context of a behavioral intervention to assess for possible trends in DCR among the fostering parent and child dyad.

Rationale/Conceptual Basis/Background: Children in foster care often have histories of trauma, abuse, and neglect, leading to maladaptation and long-term health sequelae. Behavioral interventions to support families caring for these children often use subjective self-report survey techniques to determine efficacy. Objective biomarkers, such as cortisol, aid in the determination of which interventions best promote healthy adaptation. Emerging research indicates the importance of a family caregiving lens. Consistent with the theoretical model employed, this study includes children residing in the foster home to test the feasibility of using an objective biomarker while they participated in a behavioral intervention.

Methods: This pilot study used a descriptive quantitative design, while simultaneously collecting qualitative feedback from parents. Participants (*N* = 30, 15 adults and their 15 child counterparts) were randomly selected from a behavioral intervention group and invited to participate in saliva collection. The child closest in age to the foster child, age 7 to 17 years, was included as a subject dyad with the main caregiver. Salivary cortisol was collected before the 4-week behavioral intervention, after the intervention, and 1-month post intervention on 3 consecutive days upon waking, 30 minutes after waking, and before bed. Families were tasked with collecting, freezing, and shipping 54 samples each. Concentrations of cortisol in saliva samples were determined using immunoassay kits from Salimetrics and handled per previous established protocols.

Assessment of Findings/Outcomes Achieved: Feasibility and acceptability was achieved with >90% of samples being collected and received by 14 of the 15 families. One complete dyad sample set was reported as shipped, but never arrived at the lab. Adequate saliva was collected for assay and quantitative analysis from the 14 other families. While not significant with this sample size, results showed an encouraging trend: child participants' DCR trended toward an increase in the cortisol awakening response (CAR) and increased diurnal cortisol slope (DCS), with no increase in bedtime cortisol levels upon completion of the intervention and at the 60-day mark. Only one family reported challenges with collecting adequate saliva from a child.

Conclusions/Implications: Analysis of DCR through passive salivary drool technique is feasible for fostering adults and children. The intervention appears to be associated with a trend toward improved HPA-axis function in children that participated. Salivary cortisol collection is a potential way to collect objective biological data when testing the efficacy of behavioral interventions within foster families.

PHYSIOLOGICAL AND BIOLOGICAL MEASURES

Multi-Tiered Analysis of Gene Expression Provides Evidence for Mechanisms of T2D Risk

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Purpose: The purpose of this study was to assess differential gene expression and related biological pathways in participants from a previously completed clinical trial that assessed the impact of behavioral interventions on risk factors for type 2 diabetes (T2D).

Background: T2D affects more than 30 million individuals in the United States and is associated with $245 billion in costs annually. Recent studies have identified a number of T2D subtypes with unique clinical characteristics. The growing appreciation of T2D subtypes and the contribution of gene-environment interactions to risk within subtypes has resulted in a focus on identifying and characterizing biomarkers that can reflect these complex relationships.

Methods: The study is a secondary analysis of a subset of participants (N=52) from the previously completed Practicing Restorative Yoga versus Stretching for the Metabolic Syndrome (PRYSMS) clinical trial which tested the effects of two behavioral interventions on fasting blood glucose (FBG) in overweight adults at risk for T2D. Responders were defined as individuals who showed a ³6 mg/dL decrease in FBG after 12-months, compared to non-responders who showed <6 mg/dL. This study assessed for differentially expressed genes between responders and non-responders. Then annotated biological pathways that included one or more of the differentially expressed genes were identified. The Benjamini-Hochberg False Discovery Rate method was used to adjust for multiple comparisons.

Outcomes: Overall, the mean age of the sample was 54 ± 7 years, participants primarily identified as female (70%, n=36) and White race (73%, n=38), and were obese (BMI 35.5 ± 6.8 kg/m^2). The only significant difference between the groups was baseline fasting blood glucose, which was higher in the responders (n=10, 112 ± 9 mg/dL) compared to non-responders (n=42, 100 ± 10 mg/dL) (p<0.05). Of a total of 60,675 annotated genes, 17,294 met the quality control thresholds of having ³ 10 reads in at least 90% (n=47) of the sample. There were 570 transcripts that were differentially expressed in responders compared to non-responders (p<0.05), however none of these remained significant after adjustment for multiple comparisons (q<0.05). The annotated biological pathways that involved the differentially expressed genes were categorized into themes that included neurodegenerative and protein misfolding disorders, inflammation, and immune functions.

Conclusion: Validating prior studies, we identified inflammation, immune function, and metabolic function and common themes for pathways that contained differentially expressed genes. We also identified a strong theme of neurodegenerative and protein misfolding disease, and a small number of recent studies have also described protein misfolding as one underlying mechanism for T2D. Additional studies are needed to determine if modulation of expression of genes within these pathways by synthetic miRs or antagomiRs could impact risk for T2D and responses to risk- reduction interventions. In addition, further studies are needed to determine whether the observed themes are generalizable to a population with more diverse biological and social characteristics.

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Associations between Stroke Survivors' Cognitive Function and Stroke Comorbidities

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Purpose: Stroke is the leading cause of death and disability in the United States. A devastating outcome following stroke is an accelerated and/or persistent cognitive decline. This secondary data analysis aimed to examine the relationship between stroke survivors' cognitive function and stroke comorbid health conditions. We also examined the effect of gender on post-stroke cognitive function.

Background: Following an ischemic brain injury, brain tissue is subject to circulating immune cells and inflammatory proteins that may enter the brain and perpetuate neuroinflammation. Evidence suggests that the accumulation of comorbid health conditions common to individuals with stroke, (e.g. hypertension, dyslipidemia, diabetes mellitus) also have immune responses that contribute to systemic inflammation that may initiate or exacerbate post-stroke complications. While post-stroke dementia is often associated with infarct size and location, vascular dementia may also result from neuroinflammation and a chronically "leaky" blood-brain barrier and untoward influences of systemic inflammation. Therefore, we hypothesized that the number of stroke comorbidities would be inversely associated with post-stroke cognitive function.

Methods: Data comprising this secondary analysis were collected from community-dwelling stroke survivors (n=97) located in a southwestern U.S. city, who had enrolled in a randomized clinical trial. Baseline data included participant demographics, cognitive function (MMSE/MoCA), stroke history, stroke comorbidities, and the SPI-II, an index of stroke comorbidity and risk of recurrent stroke in next 2 years. Relationships and differences between outcome variables were tested using Spearman's correlation, Kruskal-Wallis test, or Mann-Whitney U test.

Results: In this study, participants were predominantly Caucasian (79.4%) with a mean age of 68 ± 9.9 (mean ±SD) and most stroke survivors (69%) had multiple comorbidities. Total SPI-II scores were negatively correlated to both MoCA and MMSE scores ($r = -0.25$, $p = 0.01$; $r = -0.22$, $p = 0.03$, respectively) and differences in MoCA scores between SPI-II risk groups were evident ($p = 0.05$). Because the SPI-II score is largely a function of the number and severity of comorbidities, this finding supports our hypothesis that higher comorbidity burden is associated with lower post-stroke cognitive function. Although gender is an important biological variable in stroke research, we did not observe any differences in MoCA or MMSE scores according to gender in this study ($p = 0.17$ and 0.28, respectively).

Implications: Our data support the premise that comorbidity burden, rather than a singular comorbid condition, is associated with post-stroke cognitive decline. Inflammation may be an important component of this comorbidity burden and future studies that operationalize this concept will better illuminate the complex phenomenon of post-stroke cognitive decline. More timely knowledge of the risk for cognitive decline, may move the threshold of earlier management, or more aggressive management of co-occurring comorbid conditions. As one of the largest professions in the US healthcare workforce, leveraging nursing's impact in early and successful stroke management, optimizes cognitive outcomes for stroke survivors.

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Cerebrovascular Stability Index Associates with Neurodevelopmental Outcomes

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Purpose/Aims: We examined neonatal cerebrovascular stability index (CSI) and its associations with future neurodevelopmental outcomes (NDOs) in infants with congenital heart disease (CHD) compared to healthy controls (HC) at 3 early-age timepoints. We hypothesized that reduced neonatal CSI would significantly associate with poorer NDOs in CHD infants.

Rationale/Conceptual Basis/Background: Infants with CHD are at 5 times increased risk for poorer NDOs compared to HC. Surgical factors have only explained ~20% of poorer NDOs in large multicenter studies. Thus, research has shifted to factors intrinsic to the pathophysiology of CHD as possible etiologies. An important physiological factor contributing to NDOs is cerebrovascular autoregulation (CA), i.e., the brain's homeostatic mechanism to regulate its' blood flow. When CA is impaired, cerebral blood flow depends on systemic blood pressure, which may not meet the brain's changing oxygen demands, and thus places the brain at risk for hypoxic-ischemic injury. We know that infants with CHD have impaired CA preoperatively, intraoperatively, and immediately postoperatively. We do not know, however, if impaired CA persists throughout early developmental ages. Traditional measures of CA require continuous measures of blood pressure; however, a device is not approved for neonates and infants. Thus, we used CSI (a measurement of change in cerebral oxygenation during a tilt, as a surrogate for CA). We demonstrated previously that neonates with CHD have poorer CSI compared to HC.

Methods: We conducted a prospective, longitudinal study in infants with CHD and HC. We collected neonatal CSI and NDOs at 3 early-age timepoints (3-, 6-, and 9-months). We performed 3 consecutive tilts while measuring cerebral oxygenation with near-infrared spectroscopy at each age. Infants were supine for 2 minutes and tilted to a sitting (90°) position for another 2 minutes during each tilt. We determined CSI by subtracting the average 2-minute sitting cerebral oxygenation from the 2-minute supine value for each tilt and then averaging the 3 tilt values for each infant. We then used the Bayley-III to assess NDOs at each age.

Assessment of Findings/Outcomes Achieved: We examined a total of 34 CHD and 26 HC infants. Linear regression analyses demonstrated that neonatal CSI significantly associated with 9-month cognitive composite scores in the group overall ($b=1.26$, 95% $CI=0.22, 2.29$, $p=0.02$). Moreover, we detected a significant group-by-CSI interaction ($p=0.05$), indicating that the association of CSI on NDOs varied between groups. In separate subgroup analyses, CSI did not significantly associate with 9-month cognitive composite scores in HC ($\beta=0.77$; 95% $CI=-1.10, 2.64$; $p=0.41$), but did in the CHD infants ($\beta=1.49$; 95% $CI=0.22, 2.75$; $p=0.02$). However, CSI did not significantly associate with other developmental domains at 9-months and at other age timepoints.

Conclusions/Implications: We found that better neonatal CSI significantly associated with higher cognitive development scores in 9-month-old infants with CHD. This suggests that impaired cerebral blood flow may underlie neurodevelopmental abnormalities in infants with CHD. CSI is completely non-invasive and may identify infants who may be more vulnerable to developmental delays. However, more studies will validate this novel methodology and elucidate the mechanism if injury of CSI with cognitive development.

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Acute Care Nurse Leaders' Job-Related Attitudes and Perceptions on Turnover Intention

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Purposes/Aims: This study aimed to: a) analyze the association between identified contributing factors and acute care nurse leader turnover intention (NLTI) and b) explore the relationships between the acute care nurse leaders' demographic characteristics and contributing factors to their turnover intention.

Background: A healthcare organization's financial success, quality of care outcomes, patient satisfaction, and employee retention depend on stable leadership. NLTI is nurse leaders' desire to leave their current positions, excluding internal position changes caused by advancement opportunities or organizational restructuring.

Methods: A cross-sectional descriptive design with linear regression analyses was used. Data were collected through the American Organization of Nurse Leader's website and E-newsletter to its members and Facebook nursing groups with permission and contained no identifiable information. Contributing factors were identified using the 1) Professional Quality of Life Scale (ProQOL), 2) Leiden Quality of Work Questionnaire (LQOWQ) (subscales: decision authority, work and time pressure, supervisor support, and coworker support), 3) Job Satisfaction Survey (JSS), and 4) Turnover Intention Scale (TIS-6).

Results: Analysis of a single regression model combining all independent variables identified out of all the predictor variables (burnout, compassion satisfaction, secondary trauma stress, decision authority, work and time pressure, supervisor support, colleague support, and job satisfaction), only job satisfaction significantly predicted turnover intention ($n = 208$; B = -0.07, $\beta = -0.35$, $p = .001$). However, burnout (B = -1.56, $\beta = -0.34$, $p < .001$), secondary traumatic stress (B = -1.13, $\beta = -0.39$, $p < .001$), decision authority (B = 2.10, $\beta = -0.15$, $p = .002$), and supervisor support (B = 1.93, $\beta = 0.28$, $p < .001$) significantly predicted job satisfaction. When examined individually, NLTI was significantly predicted by burnout (B = 0.49, $\beta = 0.51$, $p < .001$), compassion satisfaction (B = -0.33, $\beta = -0.49$, $p < .001$), decision authority (B = -1.32, $\beta = -0.47$, $p < .001$), work time pressure (B = -0.52, $\beta = -0.16$, $p = .020$), supervisor support (B = -0.66, $\beta = -0.46$, $p < .001$), coworker support (B = -0.54, $\beta = 0.51$, $p < .001$), and job satisfaction (B = -0.12, $\beta = -0.58$, $p < .001$).

Implications: Investigating NLTI and its predictors contributes to a more in-depth discovery of the causes of nurse leader turnover, leading to improved interventions for personal well-being, career satisfaction, and retention in nursing leadership. Social media recruitment was effective but limited because of 552 responses. Over half contained missing data making it unusable. This may affect generalizability. Additional analyses could distinguish if missingness was random or represented a subset population. Future research could leverage study findings to test specific intervention strategies to address acute care nurse leaders' burnout, secondary trauma stress, decision authority, supervisor support, coworker support, and overall job satisfaction.

Professional Identity Perceptions Among Acute Care, Patient-Facing Nurses

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Purpose: To identify acute care nursing perceptions of professional identity regarding personal and collegial areas of strength and opportunities for growth.

Background: Professional identity in nursing is defined as, "a sense of oneself, in relationship with others that is influenced by characteristics, norms and values of the nursing discipline, resulting in an individual thinking, acting, and feeling like a nurse." The four domains of professional identity are: values and ethics, knowledge, nurse as leader, and professional comportment. The Professional Identity in Nursing Scale (PINS) was developed in 2020 to measure this construct. A stronger sense of nursing professional identity may support improved nursing care delivery and therefore, improved patient outcomes. Yet, professional identity is not currently measured among nurses. To help nurses and leaders measure this construct to support potentially improved nursing practice and patient outcomes, the PINS was tested among acute care, patient-facing nurses to describe areas of professional identity rated as strengths and opportunities.

Methods: Patient-facing nurses across 10 hospitals in a large health system were invited to complete the PINS scale electronically. The PINS contains 30-items distributed under each of the 4 domains of professional identity and using the 5-point Dreyfus Model (1=Novice, to 5=Mastery), participants rated each item twice following two unique prompts: "As a nurse, at what level do you demonstrate the following?" and "In general, at what level do the nurse colleagues in your work environment demonstrate the following?". Nurses also provided basic demographics. Descriptive and frequency statistics analyzed item responses and demographics.

Assessment of Findings: The sample included 333 registered nurses. The mean age was 41.79 years and the most prevalent race identified was white (85.7%). Most participants reported at least a bachelor's degree (81.5%) and nearly half had 10 or more years of nursing experience (49.5%). Most frequently reported specialty areas included critical care (34.1%) and medical/surgical nursing (35.3%).

Items most rated at the personal level of "Mastery" included Trustworthiness (39.3%), Caring (31.5%), Empathy (27.6%), and Valuing Justice (27.6%). Nurses also rated colleagues highest on these items but at lower percentages: Trustworthiness (13.3%), Caring (17.1%), Empathy (14.4%), and Valuing Justice (13.2%). Personal items most frequently rated at the "Novice" level included: Takes care of oneself (5.8%), Conflict negotiation (3.0%), and Confident (2.4%). Similarly, nurses rated colleagues lowest for the following items: Conflict negotiation (4.2%), Takes care of oneself (4.0%), and Evaluation of evidence (3.9%).

Conclusions: This study supports opportunities for personal and collegial growth in professional identity among acute care, patient-facing nurses including conflict negotiation, utilization of evidence-based practice, and self-care. The findings suggest that nurses report high levels of personal and collegial mastery in the areas of trustworthiness, caring, empathy and justice. Nurses can use this information to bolster areas of strength and address opportunities for increasing competency in professional identity. The PINS tool shows promise as a clinically relevant nursing metric which can be administered electronically in the workplace and evaluated by nurses and their leaders to advance professional identity and influence high-quality nursing care delivery.

Development of an Advanced Practice Provider Conceptual Model

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Purposes/Aims: The purpose of this model is to delineate the goals and scope of the Advanced practice nursing provider (APP) and provide a framework for considering the outcomes within the profession by creating a structure that represents the multifaceted layers of the APP.

Description: All professional disciplines have a body of knowledge consisting of theories, research, and methods of inquiry related to practice. However, there is no theory developed specifically for APP practice. APPs are placed into roles based on institution-specific titles, labels, and practice profiles that do not always cross state boundaries or even transfer from one institution to the other. There is a large body of international literature that reports confusion and ambiguity over advanced practice roles, titles, and nomenclature due to the inconsistencies in language and terms. The concepts within the proposed model are defined as follows: **APP** is a *health care provider who is not a nurse and who is not a physician. At Seattle Children's an APP is either a nurse practitioner or a physician assistant who performs medical activities typically performed at an advanced level similar to their physician colleagues.* **Clinical care** is defined as the care involving or relating to the direct medical treatment or testing of a patient hospitalized or seen in an ambulatory clinic setting. **Education** is defined as the continuing post graduate education required or pursued by the APP to enhance or expand professional and clinical knowledge. **Professional Development** is defined as any advanced training, education, and scholarly activities accomplished by the APP over and above the requirements to maintain certification for licensure.

Logic linking Theory/Concept/Method to Practice or Research: To create a conceptual framework related to the clinical core of the APP, an inter-modern approach to derive meaning from overlapping situation specific and middle-range theories was applied. This technique guides everyday practice as well as scholarly research rooted in the discipline of nursing. Assumptions within this framework have been formulated to predict and understand the phenomena surrounding the given conceptual model. The theoretical background for the model is situated within the organismic context. The desired outcome of the synthesis was a clear statement about the relationship among concepts. The APP conceptual model is represented by a circle that shows the interrelationships among the concepts that are influenced by each nested layer. While nested, layers are also interconnected structures that are constantly evolving. When given the chance to access each layer, APPs have the opportunity to increase knowledge and possibilities for learning and professional development. When all layers are unified, overall growth occurs, enhancing both clinical practice and research.

Conclusions: Empiric knowledge development was used to structure the APP conceptual model. Use of a conceptual model supports the interconnectedness between the APP, clinical care, education, and professional development, demonstrating that the APP is constantly evolving in their growth. This leads to increase in overall job satisfaction and productivity.

Frontline Staff Feedback during Development of Infection Prevention Technology

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Purpose: The purpose of this study was to gain insight into how the prototype of a handheld UV device designed to reduce risk for hospital acquired infections through surface disinfection interfaces with nursing practice in the complex and fast paced frontline care environment.

Background: Frontline nurses are challenged to adopt and integrate new technology. Technology is largely designed to increase safety and effectiveness, and to mitigate inherent risks in the care environment. While effective implementation strategies include stakeholder perspectives, barriers to the intended use of technology can arise when the design of the technology unintentionally increases the complexity at the front lines of care. One strategy for reducing unintentional and unanticipated barriers is inclusion of frontline nurses in the initial design and testing of ideas and prototype devices. This strategy communicates the value of their perspective and supports incorporation of key features into technology design and functionality that are responsive to the reality of the frontline nurse.

Methods: Qualitative inquiry provides opportunity to see the complexity of the patient care environment through the eyes of frontline nurses. Data from open ended questions following hands-on sessions with a prototype handheld UV device was obtained through individual and group interviews of frontline staff. Participants were recruited from inpatient medical-surgical and clinical education departments at a tertiary care hospital and verbally consented prior to interview. All participants were asked the same questions using a semi-structured interview tool. The interview provided participants the opportunity to talk about aspects of the specific device as well as their ideas for device properties and use implications. Transcribed interview notes were analyzed by two researchers for themes, sub-themes, and saturation.

Findings: Sixteen participants were verbally consented and interviewed. Data was rich with discussion beyond the evaluation of the device and saturated with respect to emergence of themes. Two overarching themes were the complexity of the care environment and the priorities that drive nursing decisions. Sub-themes that intersect both overarching themes included time considerations, safety considerations, and characteristics of technology designed to improve patient care. While open to the idea of a handheld UV device, potential barriers include the importance of "being faster than a bleach wipe" and not creating the need for multiple approaches necessary to disinfect the variety of surfaces found in the patient care environment, as well as device ergonomics, durability, safety, availability and effectiveness.

Implications: Findings from this study reinforce the importance of time considerations and simplicity in the practice decisions of frontline nurses regarding the adoption of technology in the care environment. While nurses are open to technology that increases safety and improves patient outcomes, data from this and a previous study implies that full adoption is dependent on the real-time context of decisions to use available options. The ability of frontline nurses to meet expectations of reducing contamination in the complex and fast moving care environment through adoption of disinfection technology warrants further study.

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PROFESSIONAL PRACTICE AND IDENTITY

Raising Nurse Leader Confidence in Addressing Microaggressions Among Staff

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Purpose: The goal of this project was to develop more inclusive nurse leaders with a virtual workshop to develop the knowledge, skills, and abilities to intervene when racial tension exists among staff members.

Background: An inclusive workplace culture is an essential part of attracting and retaining nursing staff. It is well documented that a culturally diverse nursing staff which represents the patients they serve leads to greater healthcare quality and improved outcomes, as well as a better patient experience. At times, nurse leaders are called to be mediators in situations among staff in which a comment or action was made that subtly expresses a biased attitude toward another staff member. These are called 'microaggressions', and they are directed toward a member of a marginalized group, often unconsciously or unintentionally. Nurse leaders at Seattle Children's have reported a lack of confidence and skills in addressing racial tensions among staff, and nursing staff have reported being fearful to speak up when issues of race are present.

Methods: Nurse leaders expressing interest in the workshop were assessed with a pre-post survey design, and responses distributed on a 7-point Likert scale. The survey asked about their knowledge, skills, and abilities in interrupting microaggressions; facilitating courageous conversations; and holding space for uncomfortable feedback about racism, power, or privilege. In the workshop, participants developed skills for engaging in these conversations and learned to recognize how implicit bias can affect decision making. The participants learned to provide support to team members involved in microaggressions through self-reflection, scenarios, and role play, developing confidence in these interactions. Pre and post survey comparisons were completed using Wilcoxon Rank Sums Tests.

Outcomes: Forty-two nurse leaders attended the virtual workshop. Thirty-eight (90.5%) completed the pre-survey, and twenty-three (53.8%) completed the post-survey. The survey analysis showed statistically significant improvements in the responses for nine out of the ten questions ($p<0.05$). Participants reported significant improvements in their skills and ability to address microaggressions, have courageous conversations, and hold space for uncomfortable feedback. One survey question asked leaders about their overall level of comfort and confidence in these areas, thirty days prior to the workshop, and fourteen days after. In the pre-survey, 10.5% of participants reported they were "moderately comfortable" overall, and in the post-survey, 60.9% reported this same level of comfort. Another question asked if leaders could "describe techniques for facilitating courageous conversations". In the pre-survey, no nurse leaders moderately or strongly agreed with that statement, and in the post survey, 69.5% moderately or strongly agreed.

Conclusions: The comments from participants after the workshop reflected the high value it had to them as inclusive nurse leaders, particularly in the role play and skill building portions. This project also contributed to furthering the organization's strategic imperative to become an anti-racist organization and build a diverse and inclusive workforce culture. In the coming year, the project team would like to expand workshop access to all nurse leaders in the organization, develop a plan for ongoing support, and understand the downstream impacts for nursing staff.

Academic-Practice Data Protocol to Enable Direct-Bill Tuition Reimbursement

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Purpose: A new direct-bill tuition reimbursement partnership with a cohort of 50 Bachelor of Science in Nursing candidates was established between a healthcare employer and an academic institution through an agreement with a third-party enterprise partnership consultant. This established a 100% tuition reimbursement benefit for associate-prepared Registered Nurses (RNs) to promote retention. This presentation shares the outcomes of a FERPA-protected data-sharing protocol that was developed to support this pilot. The lessons learned from this process will enable the growth of the program to support future learners.

Background: The nursing shortage has been exacerbated post-pandemic by a reduction in nurse retention. Evidence shows that academic progression can improve the quality of nursing care delivery and reduce turnover intention. Healthcare organizations have responded by offering tuition reimbursement programs for RNs to improve retention. One emerging strategy is to offer direct-bill tuition reimbursement which requires sharing FERPA-protected data across organizations.

Methods: The Plan Do Study Act (PDSA) cycle was used to guide the design, implementation, and evaluation of the pilot. The academic institution developed a new protocol for sharing this student-specific academic progression data, allowing the clinical partner to itemize the bills and track academic progression and success. As the pilot progressed, iterative improvements to data capture and sharing have enabled the clinical partner to reconcile all previous billing cycles since the conception of the program.

Intervention: Upon admission to the program, learners sign a FERPA agreement that enables sharing of data across organizations. Each of the three stakeholder organizations owns and requires different data that pertain to the employee learner and their progression through the program, which guided the database design. The academic partner built the database on a collaborative platform to maintain and share the data with the clinical partner. This allowed real-time clarification of specific student issues. Regularly scheduled encrypted data transfers were also established to follow billing cycles, application cycles, and course enrollment and completion confirmation.

Outcomes/Results: The process has helped the clinical partner track all existing students in the pilot program, with confirmation of all academic data points needed to support employee learner success. The pilot began with 47 students who have completed 137 courses and are currently enrolled in 84 more that are being directly billed to the clinical partner institution, avoiding any cost to employees. The data-sharing schedule has helped the clinical partner review old invoices from the enterprise partnership consultant to reconcile all charges. The data helps the clinical institution better support the employee learners in real-time, and more actively participate in the advising and progression of these learners through the program.

Conclusion: Direct bill tuition programs are increasingly used as an RN retention tool. The data-sharing protocols, including collaborative databases and encrypted email updates, have enabled a group of employee learners to work toward earning their bachelor's degree with no out-of-pocket costs. This new FERPA-protected data-sharing protocol will support future cohorts of employee learners and sustain direct-bill tuition reimbursement programs aimed at elevating nursing practice, improving patient outcomes, and promoting nurse retention.

Telehealth for Opioid Use Disorder Treatment: Implications for Nurse-Managed Care

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Background: For people with opioid use disorder (OUD), medications for opioid use disorder (MOUD), like buprenorphine, are the gold standard treatment. Receipt of these medications has been shown to decrease future substance use, reduce risk of infectious disease transmission, and curb adverse substance use events, including overdose. However, access to MOUD is limited for many patients. Barriers to care include availability of providers, proximity to a clinics providing these services, and high-threshold requirements of some prescribers. Two important policy changes to MOUD prescribing that have improved access and reduced barriers to care are: 1) Ability to prescribe and manage these medications through telehealth and 2) Nurse practitioners being able to legally prescribe buprenorphine in the outpatient setting. However, there is little guidance on providing MOUD over telehealth (tele-MOUD) and the role of nurses and nurse practitioners using this medium of care delivery.

Purpose: To examine the role of MOUD prescribers, nurses, and substance use counselors in providing high quality tele-MOUD to their patients receiving care through tele-MOUD and develop the principles for nurse-managed tele-MOUD.

Methods: Qualitative interviews were conducted from June-September 2021. Eligibility criteria included being a buprenorphine prescriber, nurse, or substance use counselor engaged delivery of OUD care, or a patient receiving tele-MOUD. Purposive and snowball sampling were used to recruit participants who met eligibility criteria from diverse venues including: 1) Hospital-based clinics, 2) community-based clinics, and 3) community-based and provide buprenorphine with same-day treatment entry. A qualitative descriptive method to analyze the data and development of the codebook to understand best practices for sustained delivery of high-quality nurse-led MOUD care.

Results: Of the 47 participants thematic analysis highlighted the following themes with healthcare providers: 1) Overall benefit of tele-MOUD for patient retention, 2) Limited training in providing tele-MOUD, and 3) Assessment of adherence through tele-MOUD. Additionally, nurses and substance use counselors highlighted approaches for engaging tele-MOUD patients: 1) Texting patients prior to appointments, 2) Managing “call-in” lines for individuals with inconsistent access to tele-MOUD, and 3) Addressing adherence and withdrawal symptoms prior to prescriber appointments. Patients who utilized tele-MOUD described 1) Flexibility in care and 2) Preferring a hybrid approach. Taken together, these themes were collated into principles that provided algorithms for how frequently prescribers and nurses should engage with patients with tele-MOUD, how to assess patients, including adherence, and patient-centered decision making on frequency of tele-MOUD versus in-person visits.

Conclusion: Access to MOUD is a key tool in combating the national overdose crisis. Providers, nurses, and patients indicated that telehealth provides flexible prescribing of this critical medication and increase access equity to underserved populations. There was a recognition of tele-MOUD improves access to care but also that there is a need for guidance on how to provide hybrid in-person and tele-MOUD. These care principles can increase uptake of tele-MOUD and encourage nurse-led models to fill necessary access gaps in care.

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Leveraging Technology to Deliver a Behavioral Intervention for Complex Families

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Purposes/Aims: To investigate a technology-delivered family (sibling inclusive) intervention called the Connected Family Series – For Foster Families. Focus was on increasing sibling relationships and family hardiness as foster families care for children, particularly those with disabilities and special needs. These aims were to: (1) establish feasibility and acceptability of an online behavioral intervention for caregivers and children within the foster family, (2) explore the effects of the intervention on relational quality outcomes among family member participants, with a focus on the relationship between the permanent child in the home and the foster child, and (3) decompose the mechanisms driving improved family hardiness through mediation analysis.

Rationale/Conceptual Basis/Background: The health and well-being of children in foster care are of high concern. They often experience lifelong health disparities and poor outcomes. A key protective factor is a safe and healing environment, which often comes in the form of a consistent and nurturing foster home, allowing a child to adapt and heal from past traumas. An undervalued potential resource with which to disrupt maladaptation and promote connection, acceptance, and healing is a positive relationship with children residing within the foster home.

Methods: This study employed a randomized control trial design of a behavioral intervention. Stress and relational quality outcomes among members were measured using the concepts of family hardiness, preparedness, and relationship development through a psychometrically validated self-report questionnaire, which included the Family Hardiness Index (FHI), the Integrating Foster Children (IFC) subscale from the Casey Foster Applicant Inventory (CFAI), and the Sibling Inventory of Behavior (SIB), respectively. Licensed foster families with an active placement of a foster child were recruited through social media. Blinded stratified randomization of families to groups was employed, thus ensuring families caring for high-behavioral-needs children were equally assigned to the control (waitlisted) and intervention groups. The intervention group received a 4-week, online self-paced intervention including videos and activities for both the caregiver and children in the home to promote connection and communication among members.

Assessment of Findings/Outcomes Achieved: The online intervention was successfully adapted for foster families with positive acceptance among study participants and the community-based participatory research team. Families in the intervention group participated in the online videos and activities at a rate of 78%. Of this group, there was a statistically significant increase in family hardiness ($p<0.001$) compared to the control group. Measures of a positive sibling relationship score also increased significantly in the intervention group compared to the control group ($p<0.002$), mediating 32% of the total effect in hardiness score. Sibling relationship served as a mediator for increasing indicators of family hardiness.

Conclusions/Implications: Providing the fostering family an online intervention increased positive indicators of sibling relationships in addition to overall family hardiness. Policy makers and advocates should include online interventions as a tool to support diverse families. Siblings living in a foster home should be recognized for the important role they play in the fostering experience. Future research should focus on the long-term impact this may play on placement stability and development, including long-term outcomes.

TELEHEALTH / DIGITAL HEALTH

Digital Health Usage & Information-Sharing Behaviors: A National Survey Data Analysis

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Aim: This study intends to investigate how sociodemographic, health- and technology-related factors are associated to digital health ownership and information sharing behaviors.

Background: Studies have demonstrated digital health's potential in improving health outcomes. The push for universal adoption of digital health, however, has several challenges (i.e., poor user experience, fear, privacy/security concerns, and inequitable access). Given the rapid growth of health information being shared and used across digital ecosystems, it is critical to understand the factors that underlie digital health usage and information-sharing behaviors.

Methods: This cross-sectional study obtained data from the Health Information National Trends Survey 5 Cycle 4 (*N*=3865) collected from February 24, 2020 to June 15, 2020. We analyzed two outcomes: digital health usage and information-sharing behaviors of adults (with their primary care providers [PCP], social media, and family/friends. We used descriptive analyses and weighted adjusted multivariable logistic regression to determine the predictors associated with digital health usage and information-sharing behaviors.

Results: Most of the respondents were male, white, married, and had obtained at least a high school degree. The mean age was 46.8 years old (*SE* = .30). Almost three-quarters of the respondents reported using a digital health tool. Many were willing to share health data from their wearable devices with their PCP (81.3%) or family members (74.9%).

Digital health usage. As Table 1 shows, males (aOR=0.58, *p*=.05), some college education (aOR=1.80, *p*<.001), rurality (aOR=0.58, *p*=.05), no digital device (aOR=0.28, *p*<.001), offered patient portal (aOR=2.44, *p*< 001), and positive digital tool performance expectancy (PE; aOR=4.17, p<.001) had an association with digital health usage.

Information-sharing behaviors. Similarly, males, income, chronic conditions, tablet ownership, patient portal access, PE of digital health tools, and digital health usage were associated with information-sharing behaviors with a PCP, social media, or families and friends. Table 1 shows the adjusted odds ratio (with 95%CI) for each factor.

Discussion: Those with more education, access to patient portal, and a positive perception of digital technologies were more likely to adopt digital health. Males, persons living in rural areas, and those without access to appropriate digital tools may require additional support with digital health usage. The heterogeneity of information-sharing behaviors was evident and differed depending on whom they shared it with. With performance expectancy (i.e., perceived usefulness) of digital tools as a common encouraging factor for information sharing, the lack of access to digital tools seemed to be a common barrier. As gender, education, income and chronic conditions played a role in influencing people's information-sharing behaviors, we should consider individualized interventions when promoting digital health and integrating patient-shared digital data into clinical patient care.

Conclusion: With COVID-19 moving us to the tipping point of shifting to digital care, it provides us with an opportunity to advocate for broad digital health usage and information sharing. There is a need to make digital health tools be more accessible, usable, and capable for personalized health tracking, and support the sharing of patient-generated health data to assist in clinical decision-making and quality of care improvement.

Predictor	**Digital health usage**			**Info sharing with PCP**			**Info sharing in social media**			**Info sharing with family and friends**		
	OR	***P***	**95%CI**	**OR**	***P***	**95%CI**	**OR**	**P**	**95%CI**	**OR**	***P***	**95%CI**
Age (quadratic)	0.99	.51	0.99 - 1.00	1.00	.92	0.99 - 1.00	0.99	<.001**	1.00 - 1.00	1.00	.84	0.95 - 1.02
Gender (ref: female)												
Male	0.67	.05*	0.44 - 1.00	0.92	.63	0.64 - 1.32	0.56	<.001**	0.39 - 0.79	0.81	.22	0.58 - 1.14
Race/Ethnicity (ref: white)												
Black	0.73	.27	0.41 - 1.30	1.00	.99	0.62 - 1.62	1.16	.56	0.70 - 1.93	1.21	.42	0.75 - 1.95
American Indian or Alaskan Native	1.17	.91	0.07 - 20.08	0.47	.71	0.01 - 26.21	0.22	.14	0.03 - 1.71	0.07	.06	0.00 - 1.17
Asian American Pacific Islander	1.36	.26	0.80 - 2.31	0.52	.04*	0.28 - 0.96	0.62	.32	0.24 - 1.62	0.66	.28	0.31 - 1.42
Hispanic	1.32	.22	0.84 - 2.06	0.76	.33	0.44 - 1.32	1.27	.36	0.76 - 2.10	0.69	.27	0.35 - 1.36
Multiple races	2.96	.33	0.32 - 27.16	1.63	.13	0.84 - 3.17	0.79	.64	0.29 - 2.12	1.76	.04*	1.02 3.05
Education (ref: below high school)												
Some college to postgraduate	1.80	.00**	1.25 - 2.58	1.41	.07	0.97 - 2.05	1.30	.18	0.88 - 1.91	1.35	.14	0.91 - 1.99
Income ranges (ref: below $35K)												
$36K-$100K	1.06	.81	0.65 - 1.72	1.19	.39	0.79 - 1.81	0.57	.008**	0.38 - 0.86	1.06	.78	0.69 - 1.62
>$101K	0.98	.95	0.54 - 1.79	1.21	.51	0.67 - 2.20	0.64	.12	0.36 - 1.13	1.40	.19	0.84 - 2.35
Metro vs Non metro (ref: metro areas)												
Non metro areas	0.58	.05*	0.34 - 1.00	1.05	.86	0.59 - 1.87	0.78	.36	0.45 - 1.35	1.15	.56	0.71 - 1.88
Chronic Illness (ref: none)												
Has diabetes	1.06	.82	0.62 - 1.84	0.65	.05*	0.43 - 0.99	1.56	.16	0.84 - 2.91	0.77	.31	0.47 - 1.28
Has hypertension	1.04	.85	0.71 - 1.52	1.41	.10	0.93 - 2.12	1.18	.45	0.77- 1.80	1.02	.90	0.72 - 1.46
Has heart disease	1.05	.81	0.68 - 1.64	1.60	.14	0.86 - 2.97	0.79	.43	0.44 - 1.42	0.88	.71	0.45 - 1.73
Has lung disease	1.50	.14	0.87 - 2.58	1.56	.04*	1.03 - 2.34	1.35	.12	0.92 - 1.99	1.31	.31	0.77 - 2.21
Has depression	1.01	.95	0.66 - 1.55	1.18	.25	0.88 - 1.59	1.46	.05*	1.00 - 2.12	0.79	.3	0.51 - 1.24
Device ownership (ref: owns a smart phone)												
Tablet computer	0.42	.02*	0.21 - 0.84	0.32	.02*	0.12 - 0.82	1.05	.91	0.44 - 2.50	0.26	.04*	0.07 - 0.92
Basic cell phone only	0.67	.06	0.44 - 1.02	0.79	.20	0.55 - 1.13	1.00	,99	0.68 - 1.47	0.65	.05*	0.43 - 1.00
None	0.28	.01**	0.11 - 0.71	1.03	.98	0.12 - 8.85	1.99	.42	0.36 - 11.00	1.96	.25	0.61 - 6.33
Offered patient portal (ref: No)												
Yes	2.44	.00**	1.60 - 3.71	1.02	.90	0.72 - 1.45	1.07	.72	0.73 - 1.58	1.32	.19	0.87 - 2.00
Performance expectancy (ref: No)												
Yes	4.17	<.001	2.71 - 6.40	3.78	<.001**	2.41 - 5.92	1.72	.02*	1.10 - 2.69	3.28	<.001	1.84 5.95
Digital usage (ref: None)	N/A			14.3	<.001**	6.17 - 32.98	3.11	<.001**	1.58 - 6.09	N/A		
Yes												

Note: Authors' analysis of data from the HINTS® 5 Cycle 4. We present the result using OR (95%CI) *p ≤ .05 ** p ≤ 0.01.

Pilot RCT of a Digital Health Solution for Parent-Child Shared Asthma Management

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Background and Purpose: Asthma is an incurable, lifelong condition that places children at increased risk for exacerbation, hospitalization and school absences. Most pediatric asthma interventions are overly prescriptive and target parents alone. Improving Asthma Care Together (IMPACT) is a novel shared management system comprised of a mobile health application, symptom watch, and tailored health intervention that pairs parent and child together as an asthma management team. IMPACT is designed to help families monitor asthma status, tailor asthma management, and facilitate intentional transition of management to the child. The purpose of this project was to pilot test IMPACT in children ages 7 to 11 years with persistent asthma and one of their parents. Our aims were to (1) describe the feasibility and acceptability of IMPACT, and (2) to explore the changes in primary (asthma responsibility, self-efficacy) and secondary outcomes (medication adherence, asthma control and quality of life).

Methods: Children with persistent asthma and one of their parents enrolled in this randomized controlled pilot study from October 2021 through March 2022. Parents and children completed baseline assessments of asthma responsibility, self-efficacy, medication adherence, asthma control, and quality of life. Next, dyads were randomized into intervention or control groups. Intervention dyads completed 8 weeks of weekly IMPACT activities including symptom monitoring, goal setting, and progress monitoring. Control dyads received usual care for 8 weeks and were provided access to IMPACT at the end of the study. Post intervention and 16-week follow-up assessments included baseline measures; intervention dyads also completed a post-intervention assessment of IMPACT feasibility and acceptability. Feasibility was measured by survey and the proportion of eligible dyads enrolled and retained (a priori benchmarks were ≥60% enrollment and ≥80% retention). Acceptability of IMPACT was assessed using surveys and a semi-structured interview. Preliminary efficacy was determined using a series of ANOVA models for outcome variables.

Results: Seventy-seven dyads were eligible of 140 screened; 67.5% of eligible dyads (n=52) enrolled and completed baseline measures. Forty-eight dyads completed all study visits (92% retention). Feasibility and acceptability measures had a possible score range of 4 to 20; IMPACT feasibility (M=14.4 ± 3.5) and acceptability (M=14.4 ± 3.7) indicate participants found IMPACT both feasible and acceptable. Post-intervention interviews (n=19) revealed that dyads thought IMPACT was easy to navigate (n=15), asthma management improved (n=14), and that they would continue the shared management strategies after the study ended (n=13). The most common suggestion for improvement included better integration of study hardware (n=9). Additionally, 10 dyads indicated that IMPACT would be more valuable if their child were sicker. The results of the ANOVA models found no statistically significant time*treatment interactions.

Implications: The IMPACT system was a feasible and acceptable asthma shared management intervention among parent-child dyads. While findings did not indicate preliminary efficacy, these results must be interpreted with caution given that the study sample was recruited amidst COVID-19 pandemic and widespread school mask mandates, which diminished the incidence of respiratory infections and—by extension—asthma symptoms. With minor refinements, we anticipate scaling this tailored solution for a larger clinical trial.

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Chronic Pain on the Problem List and the Association with Specialty Pain Treatment

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Purpose: Evidence suggests that complete problem lists are associated with improved patient care. However, some hospitals reported documenting chronic pain on the problem list only 2% of the time. This study aimed to examine the extent to which documentation of chronic pain on the problem list was associated with the use of specialty pain care.

Rationale: Approximately 20% of Americans experience chronic noncancer pain. Chronic pain is associated with issues in mental health, sleep, cognitive processes, and the overall quality of life. The management of chronic pain requires a multifaceted approach. Problem lists are one tool that can increase providers' awareness of relevant health problems to assist in disease treatment. Prior research has found that the documentation of heart failure on the problem list is associated with more efficient and complete care. Additionally, documentation of chronic kidney disease on the problem list was associated with providers ordering chronic kidney disease-specific blood labs. Although research on problem lists shows associations between a chronic disease diagnosis on the problem list and treatment, there has been no research on chronic pain – known more as a symptom and not a disease – and problem lists.

Methods: This was an observational retrospective cohort study that examined health record data from January 01, 2017, to December 31, 2019. Data were collected from 29 primary care clinics in the Sacramento Region of California. The sample included 4,531 patients with a chronic pain diagnosis during the study period who were 18 years or older. We excluded patients who had cancer, burns > 10% of the body, surgery within 3 months of the study, or were pregnant. The authors conducted logistic regression using SAS University Edition statistical software.

Outcomes: The sample included 68.2% females (mean age 56.7); 54.1% were white non-Hispanic, 22.5% were Hispanic, 17.5% were other unclassified groups, and 5.9% were black non-Hispanic. Most patients received specialty pain care within 365 days of their initial visit along with their primary care (87.1%). After controlling for all confounders and clinic groups, the results indicated that chronic pain documentation on the problem list was a significant predictor of patients receiving specialty pain care (odds ratio 1.57; 95% CI 1.02 – 1.51).

Conclusions: Managing chronic pain is a complex and multifaceted issue. However, using electronic health records as a supportive tool may help in the treatment of chronic pain and hopefully reduce such ambiguity. This is the first study to examine the role of problem lists in chronic pain management. However, further research is needed to determine whether there is any causal relationship between the complete documentation of chronic pain on the problem list and treatment.

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TOPICS IN EDUCATION I

Enhancing Public Health Nursing Core Competencies in a Pre-Licensure Nursing Program

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Purposes: PHN-ENTRUST (**P**ublic **H**ealth **N**ursing: **E**mpowering **N**urses, **T**eaching **R**ural care **U**sing **S**imulation **T**raining) was developed to strengthen the capacity of prelicensure nursing students to step into public health nurse (PHN) roles upon licensure

Rationale/Background: The COVID-19 pandemic showed that a rapid public health response led by nurses with population health skills, epidemiologic knowledge, and strategic planning and implementation, can facilitate disease identification, mitigation, surveillance, and prevention of lives lost. PHNs are community leaders in population health yet public health departments have difficulty recruiting nurses into available positions. The Future of Nursing (FON) 2020-2030 report emphasizes the need for nursing students to graduate with increased knowledge and motivation to utilize public health core competencies in a variety of settings.

Public health content is traditionally limited to a single course in pre-licensure nursing programs, limiting students' exposure to these key competencies. Available PHN focused simulations are rare. PHN-ENTRUST aims to fill this gap by partnering with local public health departments and pre-licensure nursing programs to develop PHN simulations that can be embedded throughout a pre-licensure nursing program, allowing students to progressively develop competency and graduate with the skills needed to move into public health settings.

Brief Description: PHN-ENTRUST used the competencies adopted by the Quad Council Coalition of Public Health Nursing Organizations (QCC) as a framework to design enhanced curriculum. Simulation was identified as a key, but underutilized component, to developing those skills. The initial implementation step was to partner with PHN leaders throughout the state to identify their high priority PHN competency needs for new PHNs. Using an online survey and focus group meeting, we collected qualitative and quantitative data to identify PHN competency priorities. These were used to guide simulation topics which we correlated with appropriate courses and embedded within the curriculum. We also created an advisory council with PHN leaders and representation from other academic centers with pre-licensure nursing programs to ensure the educational activities were appropriate for a variety of program types including bachelor's and master's entry programs.

Assessment of Findings/Outcomes Achieved: PHN leaders shared several areas in which they felt newly graduated nurses struggled in PHN roles. These align with the QCC competencies of assessment and data analytics, program planning & communication, leadership and systems thinking. Communication skills included motivational interviewing, public policy advocacy and harm-reduction conversations. Assessment and data analytics included data management, interpreting data and quality improvement. Regarding leadership and systems thinking, an understanding of disaster preparedness and response, program planning and impact of chronic and infectious disease at a population level were lacking. Based on these findings PHN ENTRUST developed, validated and pilot-tested three public health nursing simulations this year that reinforce these key nursing concepts.

Conclusions: In order to align with many of the recommendations in the FON report, academic institutions will need to adjust their curriculum with a greater focus on community-oriented nursing. Simulation education is a valuable tool to enhance students' motivation and knowledge regarding PHN roles and core competencies, which can be imbedded early into a pre-licensure program.

Funding: Health Resources and Services Administration, grant #U4EHP42428

Student Learning Perceptions after Interviewing a Member of a Vulnerable Population

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Purpose: This presentation describes the results of a completed pilot study of student learning perceptions after students in a graduate nursing course interviewed a member of a vulnerable population as a part of a social determinants of health (SDOH) unit. The process of transforming the assignment from a passive to an active learning method will also be described.

Background: Nursing students must have an understanding of vulnerable populations in our society and the SDOH. By understanding how these factors create health disparities, students may be better prepared to advocate for both individual patients and communities. Interviewing is an active learning method, and evidence across disciplines suggests that compared to passive learning, active learning improves knowledge retention, deep understanding, and application.

Methods: The prior assignment required students to research a vulnerable population in their own community and gather data demonstrating health disparities in that group. Students presented findings to their peers. The new assignment emphasized active learning. Following discussion and readings about vulnerable populations and the SDOH, students identified a vulnerable population in their community and located a member of that group to interview. To minimize stigma, students were asked to state that the interview was about that person's experiences in the healthcare system. Students were provided a list of suggested questions about the person's experiences with navigating the healthcare system, their perception of their health, how they pay for healthcare, and if their provider understands their needs. Interviews typically lasted 30 to 60 minutes. Following the interview, students wrote a reflective paper describing the health disparities they discovered during the interview and local resources they could refer the person to. Following IRB approval, students were then invited to complete an investigator-developed survey about their perceptions of learning and of the assignment. The survey consisted of six questions on a Likert-scale and a free response question.

Results: Six out of seven students in the class participated. Descriptive statistics were used to interpret the Likert-scale questions. Results of the Wilcoxon signed ranks test indicated that the six participants who completed the module and interview significantly increased their median understanding of the SDOH from before the class (*Mdn*=7) to after the class (*Mdn*=10) (p=0.03). Participants did not have difficulty identifying someone to interview, did not find the interview stressful, and felt prepared to conduct the interview. Additional feedback in the free-text portion was positive, as participants reported that the interview was worth their time, helped them realize who in their community was part of a vulnerable population, and better understand their role as nurses in addressing the SDOH.

Implications: Students need background information such as readings, class discussion, and online resources in order to successfully complete the assignment. Although not reported in this group, students may need assistance locating someone to interview and tips for asking open-ended questions. By hearing one person's story, participants in this study reported a deeper understanding of how the SDOH affect individuals and nursing's role in addressing the SDOH.

Supporting Healthy Aging in Diverse Populations: A Specialty BSN Education Program

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Background/ Rationale: The population of older adults aged 65 years and older comprises 16% of the US population and 24% are members of racial or ethnic minorities. Nurses are expected to demonstrate competency in coordinating complex care for diverse populations of older adults (OA) across the health care continuum. Focused content on complex care of older adults and clinical experiences are needed to achieve competency-based learning outcomes for this population.

Purpose: To describe an older adult specialty immersion course that provided an opportunity for entry-level nursing students from diverse backgrounds to engage in critical content and active learning experiences to develop specialty knowledge in healthy aging.

Description of Project: Eight BSN students completed a five-week summer intensive that blended interactive classroom and clinical experiences. The framework for the curriculum was the *4Ms of Age-Friendly Health Systems* (What matters most, Mobility, Medications, and Mentation). Curriculum included critical topics in healthy aging (ageism, advanced care planning, caregiving, frailty, and advocacy), telehealth, the lived experience of OAs representing diverse cultural perspectives, and supporting OAs with common comorbidities. Simulation-based clinical skill building and interactive learning activities (integrative approaches to promoting healthy aging and age-sensitivity lab) were included. Students engaged in 35 hours of community-based clinical experiences with older adults in diverse settings. Educational outcomes were evaluated using a mixed methods approach including measures of attitudes toward aging and ageism, structured weekly reflections on clinical experiences, and overall program evaluation.

Assessment of Outcomes: A general measure of attitudes on aging revealed an improvement on attitudes about caring for older adults. Ageism was measured using the Fraboni Scale of Ageism on day 1 (M=47.43, range 38-59) and the end (day 30) of the intensive (M=40.13, range 33-58). Changes in scores were not statistically significant (Mann-Whitney U z-score = -1.74, p> .05). Structured weekly journal reflections revealed intentional application of the 4Ms across clinical care settings by 100% of the students. Student reflections also revealed critical insights into caring for OAs in diverse settings such as the importance of discussing what matters most to OAs, advocacy for a holistic approach to OA care, and using cultural humility as a basis for caring relationships. Students also demonstrated beginning competency in comprehensive geriatric assessment and incorporating the 4Ms as measured by performance on an objective structured clinical exam (score ≥ 80%, range 80 – 100%). Interactive discussions and active learning modalities (clinical simulation and clinical field immersion) were rated by students as the most effective teaching/ learning methodologies.

Conclusions: This pilot course builds on foundational geriatric nursing knowledge and can be used as a model for integrating in-depth experiences with diverse older adult populations into entry level nursing and interprofessional curriculum focused on supporting healthy aging. This educational intervention may be used as a basis for building nursing leadership capacity for promoting health and wellness in older adult populations. Further exploration is needed to determine the impact of this educational intervention on the overall demonstration of specialized knowledge, skills, and attitudes by new graduate nurses working with older adults.

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Expert Nurse Educators Teach Cue Recognition: A Qualitative Descriptive Study

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Purposes/Aims: The purpose of this project was to discover how expert nurse faculty teach noticing and cue recognition skills to undergraduate nursing students. Specific aims were to explore the teaching techniques that nurse faculty report using when interacting with students during clinical experiences and uncover ways that nurse educators optimize the use of simulation technology for supporting cue recognition skills.

Rationale/Conceptual Basis/Background: The current health care environment is highly complex, requiring new nurses to apply sound clinical judgment for safe patient care. New nurses often struggle with the first phase of clinical judgment, which includes noticing and cue recognition. Nurse educators often say that they teach clinical judgment skills, however specific guidelines to accomplish this task are limited. Nurse faculty who teach in the clinical setting or the simulation setting may have unacknowledged expertise that could inform and support future educators in teaching clinical judgment to nursing students.

Methods: This study employed a qualitative exploratory descriptive design. After institutional review board approval, expert nursing faculty from across the USA (N=20) were nominated by peers and participated in semi-structured interviews in person or via webinar. Interviews were recorded, transcribed, verified, and then coded using open and axial coding procedures in a grounded theory approach. Themes were confirmed by three educators with experience in teaching clinical judgment.

Assessment of Findings/Outcomes Achieved: Several themes emerged. Faculty employed a variety of methods to teach cue recognition skills. In the clinical setting, faculty reported using orientation to the environment, Socratic questioning, role modeling, guidance in cue collection, and open discussion. Faculty teaching in simulation settings reported the importance of manipulating cues to reflect real time consequences of missing cues and manipulating cues based on best available evidence related to the scenarios.

In both clinical and simulation settings, faculty reported providing direct feedback to the students in real time as an important method. Faculty voiced their efforts to provide a "psychologically safe" environment for students to learn, which included providing a non-judgmental platform, delivering positive feedback before constructive criticism, and sharing critiques in a private manner rather than in front of patients or other students.

Conclusions/Implications: Authentic clinical environments and human patient simulation provide opportunities for undergraduate nursing students to learn cue recognition and noticing skills. However, students need the support of nurse educators to guide their learning and maintain overall safety. Expert nurse faculty possess a wealth of knowledge in how to teach clinical judgment. Nurse educators report using methods suitable across settings and specific to clinical or simulation settings. The methods and strategies that expert nurse educators reported for supporting students in clinical judgment can be used to build and refine professional development programs for new nurse educators.

RN-BSN Students' Performance and Satisfaction with Condensed 8-Week Course Blocks

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Purpose/Aims: The purpose of this program evaluation study was to explore the effectiveness of an 8-week condensed course block format within a traditional semester system using quality indicators of student satisfaction and final course grades.

Rationale/Background: Associate Degree RNs pursuing a BSN degree represent a diverse student population, many of whom balance coursework, family needs, and work demands. In response to student feedback (i.e., through end-of-course and graduation surveys), program faculty developed a new course delivery model by condensing traditional 15-week courses into 8-week course blocks. Literature indicates that condensed courses can decrease distraction, lower stress, and optimize learning.

Methods and Approach: Spradley's Theory of Change framed the development and evaluation of the change in curricular delivery format to 8-week course blocks beginning Fall 2021. This study was designated as exempt by **blinded** Institutional Review Board. Outcomes included student satisfaction from online surveys and student grades, incompletes, and withdrawal rates. A survey with open-ended questions related to satisfaction was sent to students enrolled in the RN-BSN program at a Pacific Northwest university in Fall 2021 (N=140). Text from open-ended questions were analyzed using within-methods triangulation with manual content analysis, application of the Goodwin statistic, and natural language processing. Aggregated student grades were obtained from university administrative data. Changes in the distribution of final grades (by course and by term) and withdrawal/incomplete rates were compared from academic year [AY] 2020-21 (before change in curricular delivery format) to 2021-22 (after change) using Chi-square tests.

Findings/Outcomes: Forty-nine students responded and completed the survey (35% response rate). Content analysis revealed 339 thematic units, which were organized by category and subcategory. Eight categories emerged: *Stress Level Experienced with 8-week Courses, Quality of Learning with 8-week Courses, Time Management Considerations, Succinctness of Courses, 8-week courses not Preferred, 8-Week Courses Preferred, Sequencing of Courses and Assignments,* and *Impact of Course Length on Life Balance. Time Management Considerations* was the most strongly emphasized category (Goodwin statistic: 0.67), informed by 21.2% of thematic units, of which two-thirds (66.7%) were informed by students who had previously taken 15-week courses. Natural language processing revealed these students were past-focused and driven by reward. *Quality of Learning with 8-week Courses* was informed by 13.6% of thematic units. Natural language processing revealed that most of these students (55%) scored high in differentiation (ability to differentiate between entities, people, or ideas). Grade analysis found no significant differences between AY 2020-21 and AY 2021-22 in distribution of combined final course grades overall (Fall, p=0.18; Spring, p=0.53). Examining courses individually also showed no significant difference in grade distribution between years. The proportion of withdrawals/incompletes did not change between AY 2020-21 and AY 2021-22 for spring (3% vs. 1%, respectively; p=0.09) or fall semesters (6% vs. 10%, respectively; p=0.28).

Conclusion: This program evaluation study indicates a change from 15- to 8-week condensed courses was not associated with significant changes in student grades, withdrawals, or incompletes and was met with positive feedback from students. Redesigning course delivery methods may be an effective strategy for optimizing student learning and satisfaction**.**

Leveraging Educational Digital Tools to Advance Equity in Teaching and Learning

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Purpose: The purpose of this presentation is to share faculty development work done in leveraging technology to advance diversity, equity and inclusion across several nursing academic programs.

Background: Nursing education has become more aware of the experience of minoritized communities in the context of dominant culture. In response, schools of nursing across the country are working to improve processes and content related to diversity, equity and inclusion. This presentation focuses on work done by faculty and staff at a large state university in utilizing a unifying pedagogy, and then developing a professional development series to provide digital strategies faculty can use to support students with diverse learning needs in the areas of engagement, representation, action and expression.

Brief Description of Undertaking:

Approach (Framework or Model): Faculty consensus on the unifying model of Critical Consciousness Pedagogy transformed this faculty's approach to DEI goals, specific to teaching and learning. The underlying values embedded in Critical Consciousness Pedagogy led the faculty to explore Universal Design for Learning (UDL). UDL offers evidence-based strategies and digital tools that faculty can leverage in their face-to-face, hybrid or online teaching for inclusive educational processes.

Methods (Process Used): Faculty development sessions offered twice/month focused on a variety of topics (e.g. Pedagogy, DEI and Bias, AACN's Updated Essentials, and Staying Current with EBP). Keen interest in ongoing dialogue about pedagogy, bias and leveraging technology to support diverse learning needs led to a sustained thread of introducing UDL digital tools for engagement, representation, and action and expression. Because of the faculty agreement about the underlying philosophical foundation, many faculty have been highly engaged in learning a vast array of digital tools to enhance their teaching. Digital tools for engagement include messaging apps, online checklists, online bulletin boards, digital flashcards and digital quiz tools. Strategies for representation include closed captioning, speak-text accessibility, online readers and digital graphic organizers. A variety of multimodal tools were introduced to facilitate student action and expression.

How Improvement Was Measured/Addressed: Attendance to the Professional Development Series, and ongoing dialogue have provided encouraging data about faculty engagement. Additionally, assessment of adoption of UDL strategies is ongoing.

Assessment of Findings/Outcomes Achieved: A step-wise approach to growing faculty teaching toolkits has facilitated expanded approaches to support diverse learning needs, in alignment with common pedagogical values.

Conclusions That Emphasize Next Steps for Educational Practices: The agreed-upon unifying model has invited faculty to deliberate concerns core to nursing education and develop critically conscious didactic, clinical and simulation teaching and learning experiences. A sustained approach to providing specific teaching tools to leverage technology to support diversity across academic programs has been productive. Next steps include assessment of the breadth of adoption of specific tools, and inquiry around students' experiences of utilization of new tools.

Supporting Graduate Degree Students in Implementing Projects in the Hospital Setting

Trisha Saul*, PhD, RN, PMGT-BC, Nursing Education, Providence Southern California Region, Irvine, CA*

Purpose: To provide structured supported for nursing graduate degree students to complete a school-related clinical inquiry project in the hospital setting in compliance with organizational guidelines.

Background: Most advanced degree nursing programs require implementation and dissemination of a clinical inquiry project. Often, hospital-based nurses enrolled in graduate programs elect to implement their required project in their work setting. Hospital-based clinical inquiry mentors significantly enhance nursing scholarship project completion. While students may have a school-related mentor to assist with their project development and dissemination, they can lack a hospital-based mentor to guide project execution in compliance with employer-specific policies. In a large health system, student clinical inquiry project implementation is regulated by policies including presence of an active affiliation agreement between the school and hospital, hospital site approvals, and system-level institutional review board (IRB) determination of the project as research or non-research. Inability of nurses to follow these policies can jeopardize the hospital's regulatory compliance and delay the nurse's school graduation, creating nursing dissatisfaction. Therefore, designing a process guiding graduate student nurses through organization-specific clinical inquiry project implementation policies is crucial.

Methods: A *3-Step Student Process* was designed and disseminated across 11 hospitals in one heath system in 2021 which prompts students to complete electronic forms through a shared portal to track volume of projects across the region and house project-specific documents. To begin the *3-Step Student Process*, the student is directed to contact the affiliate coordinator to verify an active affiliation agreement between the hospital and school or to create one if needed. In the next step, the student submits an electronic intake form which is received and evaluated by the region's nurse scientist. The student is then directed to select a pertinent hospital-based mentor to support project execution. In the final step, the nurse scientist and student schedule monthly to bi-monthly virtual meetings to discuss hospital-based policies including seeking project approval from the: local Nurse Research Council (NRC), and IRB prior to project implementation. Mentorship is also provided by the nurse scientist and selected specialty mentor on study design, recruitment, implantation and evaluation strategies, and statistical analysis.

Outcomes: Between March 2021 and October 2022, 80 nurses representing 23 unique schools and all 11 hospitals completed an electronic submission. Reviewed clinical inquiry projects (n=62) included non-research (n=37) and research studies (n=25) from the following programs: MSN (n=29), DNP (n=28), PhD (n=4), and EdD (n=1). Of these, 48 (77%) have presented protocols at NRC, 36 (58%) have received IRB approval, and 16 (26%) have completed projects. Seven of the 16 (44%) had abstracts accepted at state and national conferences.

Conclusion: Supporting nurse employees to implement school-related clinical inquiry projects while complying with hospital procedures is the shared responsibility of the student, school, and hospital of employment. Challenges for the hospital remain to accurately identify which employed nurses are in school and will need to implement a clinical inquiry project. The *3-Step Student Process* offers structure to ensure policies are followed during implementation of school-related projects and to track volume of projects.

TOPICS IN EDUCATION II

Leveraging Zoom Technology to Create Video Simulation Experience to Engage NP Students

***Lori Martin Plank**, PhD, FNP-BC, GNP-BC, PMHNP, FAANP, FNAP, College of Nursing, University of Arizona, Tucson, AZ; **Tarnia Newton**, DNP, FNP-C, University of Arizona, Tucson, AZ*

Purposes/Aims: Our aim was to develop a cost effective “home grown” innovative Video Simulation Experience (VSE) unfolding case study to challenge NP students’ clinical judgment and decision-making skills across specialty tracks.

Rationale/Background: The evolving complexities of healthcare today demand that nurse practitioner (NP) students across specialty tracks are trained in the acquisition of clinical judgment, decision making & problem-solving skills. In the last decade, use of simulation pedagogical methodology within Advance Practice (AP) clinical education has emerged as an assessment tool to assist faculty in evaluating clinical competencies.

Drawing up Dewey’s project-based learning theory adapted as Sox’s problem-based learning for clinical decision-making, we created a series of video simulations that mirrored real life experiences of an older adult family for NP students from acute care, family, and mental health specialties enrolled in a geriatric course near the end of their clinical program.

Method: A three scenario unfolding case study with a geriatric patient was created within an authentic environment using informal actresses, actors, and faculty to simulate the narrative pedagogy. This was developed into a VSE, utilizing virtual Zoom backgrounds to create realistic virtual environments, and presented via multiple synchronous Zoom group sessions with students. The case study followed a complex geriatric patient who encountered traumatic injuries and complications during a hospital stay; elements of ethical issues were interwoven in the scenarios. Transition to a post-acute rehabilitation environment followed for utilization of intraprofessional collaboration and complications of family caregiver issues. The final scenario depicted a realistic clinical trajectory in the home setting with mental health overtones. During the VSE Zoom session, breakout rooms were created intermittently to facilitate multiple clinical decision-making discussions. Student groups were deliberately structured to include a mix of acute care, family, and psych-mental health to facilitate intraprofessional collaboration. After each scenario, students completed an individual reflection to identify 3 learning points from the scenario and how they will apply these in their future practice as a DNP prepared NP.

Assessment: An anonymous survey after completing the three-part VSE returned 51 student responses. Significant findings included 88% found that the simulation experience stimulated their interest and engaged them in learning. Eighty-eight percent stated that the VSE helped them with communication, and 83 % developed decision-making & critical thinking skills, while 94% felt that the VSE highlighted the value of collaboration among specialties; 92% agreed the VSE assisted with understanding the complexities of caring for a geriatric patient.

Conclusions: Utilizing existing resources to create unfolding case study VSEs is an innovative way to engage NP students in learning, including collaboration and clinical decision-making for complex patients, and prepare them for the reality of future NP practice. The survey demonstrated how students enjoyed the VSE unfolding case study and were able to intellectualize, collaborate, problem-solve, critically think, and understand multiple aspects of being a clinician.

It is crucial for national Grantmakers to support learning interventions which leverage technology that advances innovative pedagogy. Making it available for all NP students will ultimately benefit the profession, future patients, and families.

TOPICS IN EDUCATION II

The Lived Experience of the DNP-to-PhD Student: Examining the Journey

***Bonni Cohen**, PhDc, DNP, ANP-C, FNP-C, CNE, FAANP, Nursing, University of Nevada, Las Vegas, NV; **Andrew Thomas Reyes**, PhD, RN, Nursing, University of Nevada, Las Vegas, NV*

Purpose/Aim: The study explored the lived experience of a Doctor of Nursing Practice (DNP) graduate who completed a second terminal degree in nursing, the Doctor of Philosophy (Ph.D.).

Rationale/Conceptual Basis/Background: There has been explosive growth in the number of DNP programs producing nurse leaders in nursing practice. Surprisingly, some of these graduates have returned to school to obtain a Ph.D. in nursing. Understanding the journey of the DNP graduate who completes the Ph.D. is essential to prepare the next generation of nursing professionals and faculty.

Methods: Husserlian phenomenology was used to understand the significance of the lived experience of participants. Purposive criterion sampling and the snowball technique were used to elicit rich narratives about the experience of obtaining a second doctoral degree in nursing. Recruitment methods included: emails to Ph.D. nursing alumni, posters, and flyers through professional nurses' conferences and social media. Ten nurses participated in individual interviews. All participants completed the same pathway to a Ph.D. Data was gathered through in-depth video chat (Zoom) interviews and digitally recorded and transcribed verbatim. The Colaizzi process for phenomenological data analysis was used.

Assessment of Findings/Outcomes Achieved: The main essence of the lived experience of the participants (i.e., nurses with two nursing doctoral degrees) is comprised of three main aspects: the *Realization*, the *Challenges*, and the *Substantive Change*. These aspects of the essence of the participants' lived experience are described as stages of their educational and professional journey. The three stages demonstrate that the participants went through developmental phases from the time they embarked on their first terminal degree to the time they completed a second terminal degree in nursing. The first stage pertains to the participants' realization of their need to pursue another doctoral degree beyond their DNP. The second stage refers to the challenges they confronted during their educational journeys and the strategies they employed to cope with and overcome these challenges, hardships, and barriers to achieve their professional goals. The third stage reflects on the benefits, rewards, and opportunities gained from obtaining a second terminal degree. Within each stage were subthemes explaining each developmental phase of their lived experience.

Conclusions/Implications That Emphasize Next Steps (for Policy, Clinical or Educational Practice) and Recommendations for Future Undertakings: These findings are the first analysis of the lived experience of DNP nurses progressing to a second terminal degree. We found that these nurses experienced challenges and barriers but had a professional transformation, resulting in increased confidence in their identity and clarity in their abilities. This understanding will be highly beneficial when evaluating strategies to assist future DNP nurses who pursue Ph.D. degrees in successfully navigating their Ph.D. programs. Understanding how to recruit, retain, and ensure this unique population of nurses' academic progression is critical to the nursing profession's continued growth equipping future nurse leaders and scholars.

ABSTRACTS OF POSTER PRESENTATIONS

A CATALYST FOR CHANGE:
ITERATIVE PDSA CYCLES TO IMPROVE PATIENT OUTCOMES

Overview: A Catalyst for Change: Iterative PDSA Cycles to Improve Patient Outcomes

***Tarnia Newton**, DNP, FNP-C, University of Arizona, Tucson, AZ*

Purpose: The purpose of this poster symposium is to share the quality improvement (QI) work of three doctoral prepared family nurse practitioner (FNP) students. That empowered healthcare teams to provide patient-centered care utilizing the Institute for Healthcare Improvement (IHI) framework of multiple Plan-Do-Study-Act (PDSA) cycles to accelerate transformative change.

Background: With the evolving complexities of healthcare today, quality improvement (QI) is a necessity for doctoral prepared FNP students to be taught the skills and knowledge to effectively navigate primary care settings. Doctoral prepared NP students need to be prepared to lead teams across a variety of settings, engage in advocacy, social justice, apply clinical investigation skills, & lead scholarly activities to improve patient outcomes.

Methods and Approach: These three QI projects will demonstrate process improvement in a variety of primary care settings across the country. These projects were implemented through three to four PDSA cycles with focused tests of iterative change occurring every two weeks over an eight-week period. The cycles addressed two areas of concentration: team & patient engagement, and clinic system changes. The first is *Increasing Advance Care Planning in a Primary Care Clinic* taking place in an Arizona clinic where the project was focused on increasing advance care planning (ACP) discussions since zero advance care planning was taking place with Medicare wellness patients. The second *Implementing Nurse-Led Visits to increase Self-Management of Hypertension* took place at a rural clinic in Wisconsin where 62% of Hypertensive patients had a blood pressure more than 140/70 & 68 % had no follow-up visits with a need for action. While the third clinic in Maryland focused on improving standardized asthma care since only 10% of their patients were receiving action asthma plans. These projects will share, step-by-step, how multiple PDSA cycles led to improved teams, patient engagement and system processes and resulted in improved patient outcomes.

Interventions: Primary interventions included team education sessions, team meetings, administrative clinic changes, EHR template creation, checklist utilization, & patient empowerment tools and education.

Outcomes Achieved: Results demonstrated across clinics showed significant improvement and transformative system changes. Where the project in Arizona implemented system changes with Medicare wellness visits time slots increasing from 30 minutes to 45 minutes, ACP prepopulated billing codes created for EHR, & generated billable services of $2,794.00 during the project. In Wisconsin hypertension patients received follow-up 93% of the time with home blood pressure monitoring and newly created nurse-led visits as compared to 42% prior to interventions. Furthermore in Maryland there was a 31% increase in spirometry and 26% increase in asthma education.

Conclusions: These projects demonstrated that quality improvement methods of multiple PDSA cycles can be used as catalyst for sustainable change. But, also crucial in teaching doctoral prepared FNP students the skills required to lead teams across a variety of settings, learning to manage organization challenges, change system processes, and changing organization culture to improve patient outcomes.

A CATALYST FOR CHANGE:
ITERATIVE PDSA CYCLES TO IMPROVE PATIENT OUTCOMES

Implementing a Process for Improving Advance Care Planning for Medicare Beneficiaries

***Renee Sturniolo Wiruth**, DNP, FNP-C, University of Arizona, Tucson, AZ*

Purpose: The purpose of this quality improvement project was to increase advance care planning discussions between providers and patients in a primary care setting.

Background: Advance directives (AD) are an important aspect of health care, with the potential for improved alignment with personal priorities, beliefs, and increased family satisfaction with care outcomes for loved ones. Over the past few years, there has been a movement in health care to promote advance care planning (ACP) within the realm of primary care. Unfortunately, rates of AD completion in the US are as low as 33%. Research has demonstrated that some health care providers do not feel confident or comfortable discussing ACP with their patients. Nurses utilize a holistic approach to patient care including physical, mental, and spiritual wellbeing. All of which play an integral role in discussions of end-of-life care.

Rationale: Prior to this project, no standard routine best practices were followed for advance care planning (ACP) in this clinic. Consequently, Medicare patients were receiving suboptimal care with a lack of ACP discussions. A chart audit of Medicare patients showed a significant gap in care, with 0% of patients receiving ACP discussions.

Description: This project design incorporated Kolb's experiential learning theory and three rapid Plan- Do- Study-Act (PDSA) cycles. The iterative test of change focused on incorporating ACP conversations with Medicare Annual Well visits, billing & staff education. Interventions of change included team education, which included an opportunity to practice an ACP conversation with a standardized patient. In addition, patients were given AD forms with an informational pamphlet about how to talk about desires forend-of-life care. Process changes involved Medicare Wellness visit time slots increasing from 30 minutes to 45 minutes, and an ACP billing code was added to the group of prepopulated CPT codes commonly used for billing. Iterative tests of change (TOC) were used to improve ACP conversations, as well as billing for ACP services. Operational definitions were established for each TOC to prevent ambiguity. Outcome measure included the mean score of Medicare Well visits to ACP billing code captured in the EMR. Data were collected and analyzed using run charts, chart audits, and surveys.

Outcomes: Results from PDSA cycle 1 showed 0% ACP conversations taking place during any Medicare Well visits, due to inadequate systems. However, there was much improvement after the subsequent PDSA cycle, with an overall mean average of 84% of patients receiving standardized ACP discussions during their Medicare Well visit. Definitely, demonstrating an improvement of ACP in this much-needed population.

Conclusion: Despite numerous challenges along the way, this QI project improved ACP conversation activity and billing. Although not generalizable, the findings from this quality improvement project may inspire other providers to adapt the methods used here to fit their particular context in an effort to achieve better patient-centered ACP conversations thus, improving end-of-life conversation.

A CATALYST FOR CHANGE:
ITERATIVE PDSA CYCLES TO IMPROVE PATIENT OUTCOMES

Implementing Nurse-Led Visits to Increase Self-Management of Hypertension

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***Julia Huffaker**, RN, DNP Student, University of Arizona, Tucson, AZ*

Purpose: This quality improvement was to increase patient's confidence in managing hypertension by implementing nurse-led visits for hypertension management in a primary care practice.

Background: Hypertension is one of the leading causes of morbidity and mortality in the United States. Over 116 million Americans have been diagnosed with hypertension and since hypertension usually presents with no symptoms, many go undiagnosed. Hypertension can be successfully managed with lifestyle modifications and pharmacotherapy. Implementing nurse-led visits to assist in the management of hypertension is an effective way to ensure follow-up and provide education for patients with high blood pressure.

Rationale: Prior to this project zero nurse-led visits were taking place to assist patients with self-management of hypertension. Thus, a significant gap in care identified with hypertension education & management.

Methods: This quality project utilized four rapid Plan-Do-Study-Act (PDSA) cycles. The iterative test of change (TOC) focused in the areas of team engagement, patient confidence, and system change of nurse-led visits. Operational definitions were established for each TOC to prevent ambiguity. Outcome measures included chart audits, actual nurse-lead visits offered, nurse-led visits that took place and patient confident survey post nurse-led visit. Data were collected and analyzed through bi-weekly chart audits, run charts & surveys. The data on run charts and feedback were reviewed to modify subsequent interventions accordingly.

Outcomes: By the end of the project 32 patients were offered nurse-led visits with 7% refusing, 11% scheduled for future nurse led visits beyond the project, 19% opting for home blood pressure monitoring and 63% actually completing a nurse-led visit. Team confidence of medical assistants (MAs), & registered nurses (RNs), increased after the educational intervention with 100% confident with initiating and conducting nurse-led visits. A post survey administered after the nurse-led visits signified a 100% increase in confidence in blood pressure measurement and management by patients. The survey also highlighted that 63% felt they had difficulty following the diet prescribed by their doctor and 54% answered "I have too many other things to worry about" signifying the disease burden for these patients with hypertension. Thus, demonstrating how crucial nurse-led visits are for improving hypertension outcomes as well as a team that is confident with the guidelines and treatment plans for hypertension.

Conclusions: This quality improvement project demonstrated that through a systematic process of PDSA cycles that patient confidence in managing blood pressure through nurse-led visits is key to improve understanding of hypertension for patients. It seems a patient-centered approach and tailoring nurse-led visits to each patient's individualized needs allows patients to be active participants in their healthcare decisions.

A CATALYST FOR CHANGE:
ITERATIVE PDSA CYCLES TO IMPROVE PATIENT OUTCOMES

A Comprehensive Approach for Asthma Education and Action Planning

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***Erika Loppatto**, BSN, DNP Student, University of Arizona, Tucson, AZ*

Purpose: This quality improvement project was to increase utilization and documentation of written asthma action plans, spirometry testing, and education for providers for asthma patients in a primary care practice.

Background: In the United States, there is approximately 38% of children and 50% of adult asthma patients suffering with uncontrolled asthma. With an estimation of 43.12 million new cases and 490,000 deaths annually. Currently The total 20- year national direct cost of uncontrolled asthma is about 300.6 billion dollars. Gaining control of asthma is crucial requiring supported self-management interventions from healthcare providers to help asthma patients learn strategies to control their disease, improve quality of life, reduce emergency room visits, hospitalizations, and healthcare costs.

Rationale: Prior to this project documented asthma action plans (AAP) were done 10% of the time, spirometry completed 27% of the time, and asthma education handouts provided with only 58.% of asthma patient visits demonstrating a significant gap in care.

Description: This project design used four (two-week) rapid Plan-Do-Study-Act (PDSA) cycles over an 8 week period. The iterative test of change focused on asthma action plan documentation, spirometry testing & asthma education handouts. A presurvey was sent to all providers to measure provider awareness and current asthma practice. Process changes involved frequent educational interventions of the significance of AAP, creation of AAP guidelines accessible to providers during patient visits, & creation of permanent laminated AAP guidelines for clinic rooms. Iterative tests of change (TOC) were used to improve asthma right care. Operational definitions were established for each TOC to prevent ambiguity. Outcome measures included mean scores of chart audits for APP utilization, spirometry , and educational handouts during a visit . Data were collected and analyzed using run charts, chart audits and surveys.

Outcomes: A total of 115 charts were evaluated over the 8 week project. Chart audits of patients with asthma ICD-10 codes were completed weekly with a final mean score in PDSA 4 of AAP charting increased from 10.0% to 31.%, spirometry increased from 27 % to 58% and asthma education from 57%- 83%. Surveys found that providers felt their knowledge of asthma, guidelines, and medications increased post-intervention. Also noted was an increase in perceived provider confidence and preparedness in providing asthma education and action plans. Definitely, demonstrating an improvement in care for this population.

Conclusion: This project improved compliance with asthma guidelines, spirometry testing, increased asthma action plan utilization, & education handouts to patients. The project also, increased provider knowledge, confidence, and preparedness in caring for asthma patients. Furthermore, demonstrating that quality improvement methods of rapid PDSA cycles can be used as a catalyst for change to assist primary care providers to improve patient-centered clinical practice as well as overall asthma patient outcomes.

Human Papillomavirus (HPV) Vaccine Hesitancy Among Guardians of Adolescents

***Jin P. Harris**, FNP, Nursing, Indian Health Services, Eagle Butte, SD;* ***Judith O'Haver**, DNP, Nursing, Northern Arizona University, Flagstaff, AZ;* ***Beth G. McManis**, DNP, Nursing, Northern Arizona University, Flagstaff, AZ*

Human papillomavirus (HPV) is a major cause of genital warts, oropharyngeal, cervical, anal, vulvar, vaginal, and penile cancers and has been associated with 33,700 cases of cancer annually in South Dakota (SD)(SD Department of Health, 2019). The World Health Organization has called for an increase in HPV vaccination rates with a target of 90% by 2030 to help ameliorate this risk (Melkonian et al., 2020). A 2-dose vaccine was approved in 2006 for common subtypes of HPV associated with the cancer risk which was approved for children and adolescents in 2006 (Hennebery et al 2020). In some populations there is a hesitancy for children to be vaccinated. The purpose of this project is to assess the baseline vaccination rate in a population enrolled in one tribe in SD and to evaluate the variables associated with hesitancy including reasons guardians give for not consenting for their child to be fully vaccinated.

Implementation of Aggression Screening in a Child and Adolescent Psychiatry Unit

***Damon Bennett**, MSN, School of Nursing, University of Maryland, Baltimore, MD*

Background: Aggression is a problem that is currently threatening the healthcare world, specifically those working in psychiatric units. Aggression in inpatient units may result in the use of seclusion and/or restraints. These seclusion and/or restraint events can result in injury, post-traumatic stress, and hallucinations.

Local Problem: This 14-bed child and adolescent inpatient psychiatric unit has experienced a 236% increase in the use of seclusion/restraints over a one-year time period. The purpose of this quality improvement (QI) project is to implement DASA-YV screening in a child and adolescent inpatient psychiatric unit for patients ages 8 to 17. Implementation of aggression screening is effective in reducing aggression, seclusion, and restraints

Methods: This project is being implemented over a 15-week period from August-December 2022. The DASA-YV screening tool was integrated into the electronic health record. The multidisciplinary team developed guidelines for interventions for each scoring category of screening. Each psychiatric registered nurse was trained on the use of DASA-YV.

Preliminary Results: Baseline data were collected for seclusion and restraint events for 8 weeks pre-implementation. The numbers of seclusion and restraint events were 0, 0, 2, 2, 4, 3, 4, and 5 respectively. During the first week of implementation, there were 0 seclusion and restraint events. Week 2 of implementation indicated a sharp increase in the use of seclusion; resulting in 13 events. There were 3 seclusion events in both week 3 and week 4. Week 1 and week 3 revealed 100% compliance in utilizing the DASA-YV screening tool.

Preliminary Conclusions: Despite a sharp increase in the use of seclusion and restraints one week, seclusion and restraint events have decreased. Preliminary analyses indicate that this practice change is well accepted by staff. Implementing the DASA-YV can reduce the need for seclusion and restraints.

Using the EMR and Nurses to Improve Adherence to Health Care Transition Best Practice

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Purpose/Aims: Assess if standard guidelines of care and tools in the electronic medical records (EMR) can be used effectively by multiple specialties to implement a structured and sustainable process to support adolescents and young adults transitioning from pediatric to adult care.

Rationale/Background: Approximately 500,000 adolescents and young adults transition from pediatric to adult health care annually. Studies have shown improved health outcomes with a structured health care transition (HCT) process, like Got Transition's Six Core Elements of HCT. This was endorsed in the American Academy of Pediatrics, American College of Physicians, and American Academy of Family Physicians' 2018 clinical report. Despite clear recommendations for best practice and evidence of improved health outcomes, many health care providers face barriers in incorporating HCT activities as part of their standard practice in caring for adolescents and young adults. Current literature often focuses on the physician's role in HCT and ignores or discounts the role of nurses in the process.

Description: Using a prospective quality improvement approach, a structured process utilizing EMR tools is being implemented for adolescents and young adults transitioning from pediatric to adult care. Patients ages 14 and older who are seen in the outpatient setting at Seattle Children's Hospital by Craniofacial, Dialysis, or Neurosurgery (anticipated N = ~ 750) will receive standardized interventions using the electronic medical record. The anticipated duration of this pilot is August 2022 to July 2023. As the interventions are linked to tools in the EMR, the implementation rates of the interventions will be tracked by EPIC analytics. Pre and post surveys will be given to the health care providers to identify barriers and assess satisfaction with the HCT process. In addition, a pre and post assessment of the practice's health care transition process will be completed by each specialty before and after the pilot. The providers surveyed include physicians, nurse practitioners, registered nurses, social workers, and others. The EMR tools were designed to address existing barriers, like lack of time and knowledge. They include:

1. A telemedicine clinic for adolescents and young adults, led by a registered nurse
2. An automated policy letter sent electronically to patients who meet set criteria
3. Portable medical summary letter that uses smart links to incorporate relevant information from the patient's chart
4. Transition specific order set, including relevant referrals
5. Standardized "SmartPhrases" for provider's documentation and to incorporate transition education in the After Visit Summary provided to patients/families

Assessment of findings/outcomes achieved: Results will include the proportion of eligible patients who received the age specific health care transition activities, provider responses to the survey, and the pre and post assessment score of the health care transition process. Of the 39 responses to the pre-survey, 94.9% of respondents indicated time and 92.3% stated a lack of a clear HCT process were barriers.

Conclusions: Findings will enhance knowledge about the role of nurses, the EMR, and standard guidelines in implementing effective HCT programs.

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Testing of a Game-Based Intervention to Promote COVID-19 Vaccination Among Youth

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Purpose: This study aims to assess the usability of a game-based COVID-19 intervention for youth aged 11-14.

Background: The emergence of the coronavirus disease 2019 (COVID-19) and the long-term health effects of its infection have imposed negative changes on our lives. Arizona was one of the top ten states with the most cumulative child COVID-19 cases. The disease outbreak in the state was found following the start of school, with sufferers typically being youth. Infected youth could develop recurring or ongoing health problems and progress to severe complications involving multiorgan dysfunction and failure. COVID-19 vaccinations are critical measures for all eligible persons aged 6 months and up to mitigate the asymptomatic infection and transmission. However, it remains a challenge for youth to complete the recommended COVID-19 vaccine series and stay up to date with the boosters. Youth’s delay in vaccination and parents’ hesitancy toward vaccinating their children were found to relate to a lack of awareness, knowledge of COVID-19, and concerns about the vaccine safety. Serious games were educational and entertaining. The use of serious game-based interventions to address suboptimal vaccination coverage showed promising results in improving vaccine knowledge, encouraging parent-child communication about vaccination, engaging youth in vaccination decision-making, and promoting their vaccination behaviors.

Methods: This study employed a mixed-methods approach with convergent design. English-speaking parent-child dyads who were living in Arizona and with unvaccinated child aged 11-14 were recruited via snowball sampling and social media. Pre and post online surveys assessed individual characteristics, sources of vaccine information, attitudes toward vaccination, intentions to take the vaccine and complete its series, and reasons for not receiving the recommended doses. The post intervention survey and semi-structured interviews were conducted immediately after playing the game. The interview evaluated youth’s knowledge about the COVID-19 and its vaccines; experience of navigating health information; preferred type of information supporting vaccine decision making, expected vaccination outcomes; it also collected participants’ additional thoughts and concerns about the general and the COVID-19 vaccine, and their feedback on modifying the intervention prototype. Descriptive statistics will be used to describe key measures; non-parametric tests will be used to measure changes in intentions before and after playing the game. Thematic analysis will be used to analyze qualitative data and identify the key patterns and emerging themes. Both the quantitative and qualitative results will be merged to provide a comprehensive understanding of vaccine decision-making and the user experience of the intervention.

Assessment of Findings: The data analysis is ongoing.

Implications: The findings of the study will contribute to scant evidence of possible factors influencing the user experience of a COVID-19 game-based intervention among youth and their parents. The findings will also offer insights into how to improve the design of the intervention and implementation process to reduce the risk of COVID-19 infection and its associated morbidity and mortality among youth.

Funding: PhD Seed Research Grant Funding, Edson College of Nursing and Health Innovation, Arizona State University

A Non-Nutrition Based mHealth Program: Impact on Dietary Intake in College Students

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Background and Purpose: It is well established that college students generally increase body mass throughout the course of the first year, and that dietary intakes are worthwhile to explore in this population. The purpose of this investigation was to explore baseline dietary intake, specifically macro- and micronutrients, and eating habits (including location of consumption and use of electronic devices) of a college student sample compared to the current Dietary Guidelines 2020-2025. Additionally, we wanted to evaluate the effect of a non-nutrition based mHealth program that focuses on blood pressure and its potential impact on dietary intake.

Methods: This is a secondary analysis study using the randomized controlled trial data, the **O**ptimize **B**lood Pressure **I**mprovement (**MOBI**LE) intervention. Full-time college students were recruited, and the study used mHealth technology to modify behaviors and encourage healthy habits. The intervention outcome focused on lowering blood pressure, including measuring the students' knowledge, nutrition intake, and daily motivation whereas this secondary analysis evaluated nutrition values related to eating habits (i.e., location and use of electronic devices) based on the ASA-24 Dietary Assessment Tool.

Results: Participants (n = 28) reported a total of 822 items consumed during this study. Most items were consumed at home (n = 629, 76.5%). Significant differences were found among the measures for several locations, including energy, protein, total fat, carbohydrates, total fiber, total vegetables, total grains, and total meat (all $p < 0.05$). For most of these measures, consumption at home and/or restaurants resulted in a greater magnitude of consumption than at other locations. Participants reported consuming most of their energy and nutrients while either using electronic devices alone (n = 365, 44.4%) or, surprisingly, using no devices (n = 346, 42.1%). Significant differences were found among fewer measures, including energy, total fat, and total fiber. For these three significant measures, those reporting consuming foods while watching TV exceeded both electronic devices and no devices for energy and total fat, and TV exceeded no devices for total fiber. Most participants were below recommended consumption guidelines for total fiber, fruits, and vegetables, while mean carbohydrate consumption exceeded recommendations.

Conclusions & Implications: As a whole, the majority of the macronutrients consumed by our sample were under the threshold recommended in the 2020-2025 Dietary Guidelines. It is alarming, albeit not completely surprising, to discover that college students are already demonstrating unhealthy eating habits by not meeting dietary guidelines. These findings suggest the need for the development of public health education interventions to address appropriate eating habits among college students. A non-nutrition based mHealth program focusing on blood pressure did not appear to improve dietary intake patterns.

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Creating Space for Adolescents to Build Familial Empathy and Communication

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Introduction: Evidence-based family interventions targeting risk for sexual exploitation among young people is an emerging area of research. As young people with lived experience of homelessness are particularly vulnerable to sexual exploitation, adapting evidence-based interventions with demonstrated efficacy among homeless adolescents holds promise for mitigating risk for sexual exploitation, particularly among marginalized youth at highest risk. Support To Reunite, Involve, and Value Each other (STRIVE) is an evidence-based, psychoeducational, family intervention with demonstrated efficacy at decreasing high-risk sexual behavior, substance use, and delinquent behaviors among young people experiencing homelessness.

Methods: Educational content regarding sexual exploitation and healthy sexual relationships was added to the original STRIVE intervention, which is based upon cognitive behavioral therapy, to explore whether STRIVE+ would decrease risk factors for sexual exploitation among minoritized youth recently experiencing homelessness. As a follow-up to piloting STRIVE+ in Chicago from 2019 to 2020, 14 participants (7 adolescents, 6 parents, and 1 grandparent) were invited to participate in semi-structured interviews in 2021. The purpose of this study was to better understand facilitators of implementation by exploring participants' experiences with the STRIVE+ intervention with a focus on the acceptability, appropriateness, meaningfulness, and effectiveness of STRIVE+.

Results: A total of 11 participants (79%), all from minoritized backgrounds, were interviewed (6 adolescents, 4 parents, and 1 grandparent). The following themes (and sub-themes) emerged: *The STRIVE Space; Increased Empathy via Greater Perspective Taking and Attunement (Perspective Taking and Attunement); Improvements in Communication (Self-Reflection, Opening Up, Systematic Approach to Communication, and Less Yelling);* and *Emotional Regulation (Stepping Back, Self-Awareness, and Building Ownership & Accountability to Identify Future Areas for Development)*. The themes and sub-themes identified reflect that participants found both relevance (i.e., acceptability) and meaning (i.e., meaningfulness) through participating in STRIVE+, and suggest the adapted intervention was effective in achieving its intended effects.

Discussion & Implications: The study's modest but in-depth qualitative findings demonstrated feasibility of recruitment, engagement, and retention of minoritized adolescents with lived experience of homelessness and their parents. Study findings aligned with the goals of the intervention and demonstrated acceptability, meaningfulness and effectiveness, suggesting that STRIVE+ is not only efficacious in reducing substance use, delinquency, and risky sexual behavior but is also effective in reducing conflict, clarifying roles, teaching problem solving, and improving emotional regulation in both adolescents and their parents. Study findings support the feasibility of scaling STRIVE+ through larger implementation studies and underscore the need to enhance communication, problem solving, and emotional regulation skills within safe spaces to reduce family conflict.

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Reducing Mental Health Disparities in Adolescents with Chronic Conditions

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Purpose: Adolescents with chronic conditions experience severe mental health disparities– four times the odds of suicide attempts than peers without chronic conditions[1]. In 2022, a national mental health emergency was declared by the Children's Hospital Association requesting federal resources to address crisis levels of adolescent self-harm across the country[2]. Little is known on factors influencing access, utilization, and engagement with mental health systems in adolescents with chronic conditions. The purpose of this study was to understand the influence of health access literacy, health self-efficacy, and emotional wellbeing on engagement with mental health systems in adolescents with chronic conditions to inform resource allocation.

Approach: We applied a mixed methods design to survey and interview adolescents with chronic conditions, aged 10-21 years. Participants were recruited from an adolescent medicine practice, a pediatric primary care practice, and a large pediatric emergency department located across the north, central, and southern regions of a statewide academic children's health system. Random sampling was applied during recruitment to avoid bias. Numerical data was collected using valid and reliable scales that measure health access literacy, health self-efficacy, emotional wellbeing, and engagement (Youth Engagement with Health Services (YEHS!) scale and patient reported outcome instruments) – and analyzed using structural equation models. Textual data was collected and analyzed using a semi-structured interview guide and an interpretive phenomenological approach. Results from both types of data were analyzed and integrated for further analysis.

Outcomes: 154 participants provided numerical data; 17 participants provided textual data (mean age 15.5 years; 56% female; 56% white; 16.9% Black or African American, 4.5% Asian; 51.9% Hispanic or Latinx; 23.4% LGBTQ+). The structural model was an acceptable fit for the data (CFI = 0.97, TLI = 0.95, RMSEA = 0.08). Participants reported higher levels of health access literacy (M=3.88, SD=0.848) than health self-efficacy (M=2.98, SD=.646), and engagement (M=1.78, SD=1.71). Health access literacy predicted emotional wellbeing (b = .33, p < .001, 95% CI [.20, .50]) and health self-efficacy (b = 0.52, p < .001, 95% CI [0.42, .062]). Emotional wellbeing positively predicted health self-efficacy (b = 0.21, p < .003, 90% CI [0.10, .033]). Relationships between health access literacy, emotional wellbeing, health self-efficacy and engagement were positive, but lacked statistical significance within a 95% confidence interval. Participants did not engage until "it was really, really bad" citing fear, stigma, and lack of connectedness with providers as barriers. Participants of racial and ethnic minority experienced greater barriers to access than Caucasian participants. The study was limited by sample size.

Conclusion: Regardless of health access literacy and health self-efficacy, adolescents with chronic conditions may not engage mental health systems until crisis. This novel finding helps to explain mental health disparities between adolescents with and without chronic conditions and inform allocation of resources. The findings further expose inequities in access for racial and ethnic minority adolescents with chronic conditions that nurses are called to address. The results provide a foundation for nurses to innovate and test models of mental healthcare delivery that are developmentally and culturally specialized for this vulnerable population.

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Detachment in Telehealth: An Emerging Concept

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Aim: To conceptualize the phrase "detachment in telehealth".

Definition of Concept: The conceptual phrase, "detachment in telehealth" pertains to patients who cannot engage in their telehealth delivered health care. Detachment includes a feeling of disconnectedness, disengagement, and disinterest. Developmental stages, mental, emotional and life situations influence detachment. This concept analysis examines these influencers of detachment only when telehealth modalities are used and applies the concept to adolescents who are seeking mental health care using remote consultation.

Attributes of both Erikson's stages of development and attachment theory, detachment in telehealth speculates that the adolescent stage of identify versus role confusion as well as the loneliness associated with depression impedes an individuals' enhancement of therapeutic rapport. Additionally, adolescents need to trust their health care provider but if they only meet virtually, it may be difficult to do so. There is a positive associational relationship between the two ideas: as therapeutic rapport increases, the level of attachment increases, thereby reducing loneliness in depression.

Logic linking concept to practice: This conceptualization was actualized during the COVID-19 pandemic when the majority of outpatient mental health care shifted to telehealth. There was a noticeable lack of engagement and more difficulty in building therapeutic rapport in the adolescent population, more so than adults. Post pandemic, outpatient mental health care delivery will continue to use telehealth to improve access to care. Therapeutic rapport (as measured by the Working Alliance Scale) improves patient engagement and treatment outcomes. Understanding "detachment in telehealth" will enable identification of adolescents who may not benefit from mental health remote consultations.

Conclusion: Nurses need to build a robust therapeutic rapport to engage patients and improve their mental health. Certain populations, particularly adolescents with mental health issues, need special consideration and effort. Understanding the concept of detachment while using telehealth can help target interventions to improve patient-provider communication.

Behavioral Emergency Response Team: Proactive Violence Prevention in Urban Hospital

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Problem: Workplace violence (WPV) is an on-going problem in the healthcare field and the incidence of aggression and violence by patients and their family members is on the rise in acute care settings. According to the Occupational Safety and Health Administration (2015), in the year 2011 through 2013, U.S. healthcare workers suffered 15,000-20,000 workplace violence-related incidents resulting in severe injuries and time away from work for treatment. In a 179-bed urban hospital facility in Maryland catering to the needs of inner-city population, there has been an increase in aggression and violence towards healthcare workers in the adult (18 years and above) acute care settings. The use of combative patient code and security calls has increased significantly within the last year especially in the 18-bed inpatient medicine unit. The unit has had an increase in the number and frequency of patients with mental illness and substance misuse requiring medical care. Due to this ongoing problem, there is an increase in verbal and physical assault on staff members, staff burnout and turnover, and poor patient outcomes such as restraint and forced medication usage

Purpose: The purpose of this quality improvement project is to implement and evaluate the effectiveness of the implementation of a proactive violence prevention initiative called behavioral emergency response team (BERT) at an urban hospital facility in Maryland.

Methods: The intervention will be implemented over a 15- week period and piloted on the medical/surgical floor. The first three (3) weeks involves training of the BERT members about de-escalation techniques with the utilization of in-vitro simulations to rehearse real-life situations. The pilot unit staff members will receive education about use of BERT, activation algorithm and behavioral emergencies. The management of aggression and violence scale (MAVAS) will be provided to pilot unit to capture staff perception of aggression pre and post intervention. Following education, BERT members will respond to behavioral emergencies on the pilot unit. Subsequently, weekly collection of data such as the amount of BERT and security calls, combative patient codes and reasons for the calls will be uploaded into REDCap, a HIPAA-compliant, password-protected server. Data spreadsheets, reports and run chart will be analyzed using REDCap to track the amount of security calls, BERT calls, and staff perception of safety pre-and post-intervention.

Results: This is pending as implementation is currently taking place till December 15, 2022.

Conclusion: The anticipated outcome of this QI project is reduction in utilization of security services, reduction in use of restraints and increased safety perception of staff members in the clinical setting.

COVID-19 Impact on Psychiatric Symptoms in Residents of a Skilled Nursing Facility

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Background: The COVID-19 pandemic has impacted the health, quality of life, and socialization across the lifespan. Specifically, older adults with mental health conditions have a high risk of experiencing psychiatric symptoms and/or their escalation from the pandemic. Examining the occurrence of these symptoms in a skilled nursing facility can help to understand the pandemic's effect on older adults with psychiatric symptoms. However, there is little to no investigation of older adults with psychiatric symptoms living in skilled nursing facilities during the COVID-19 pandemic.

Purpose: The objective of this retrospective descriptive study was to characterize the psychiatric symptoms experienced by older adults residing in a skilled nursing facility during the COVID-19 pandemic. Another objective was to characterize any change in the symptoms by comparing data from the first year before the pandemic (the pre-pandemic period) to the first year of the pandemic.

Methods: Data from the electronic health records of a skilled nursing facility (180-bed) was used to establish a database of older adults (n = 83) with psychiatric symptoms before and during the pandemic. Symptoms included (1) changes in behavior, decision making, level of consciousness, thinking, and understanding, (2) delirium, delusions, hallucinations, and inattentiveness, and (3) wandering. The data were analyzed with descriptive statistics with a power of .75 and an alpha of .05.

Assessment of Findings: Participants had a mean age of 70.65±9.9, and were predominantly diagnosed with dementia (n = 32, 33.3%), white (n = 72, 87%), female (n = 54, 65%), divorced (n = 27, 33%), and covered by Medicaid (n = 70, 84%). During pre-pandemic, participants manifested disorganized thinking, disruptive physical behaviors, disruptive verbal behaviors, hallucinations, and impaired decision making. From the pre-pandemic to the pandemic phase, there was a decrease in understanding and an increase in delusions, disruptive physical behaviors, disruptive verbal behaviors, inattentiveness, and wandering. There was no change in disorganized thinking, hallucinations, or impaired decision making.

Implications: The COVID-19 pandemic impacted the occurrence of several psychiatric symptoms manifested by older adults living in a skilled nursing facility. The database facilitated the identification of the impact and the symptoms. Findings from this study of a microscopic environment (residents in a skilled nursing facility) are pivotal in understanding the impact of the COVID-19 pandemic on the development and escalation of psychiatric symptoms. Equally important, the findings highlight the need to enhance the assessment and the treatment of older adults experiencing these psychiatric symptoms, regardless if they are living within or outside a skilled nursing facility. Future longitudinal and multisite studies are warranted to further examine the utility of a database for improved mental health care in practice and policies for appropriate healthcare delivery during and after the COVID-19 pandemic.

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Babywearing Reduces Urges to Use Substances in the Postpartum Period

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Purpose/Aims: The purpose of the present study was to examine the effect of babywearing as a behavioral intervention in mothers with Opioid Use Disorder (OUD) in relation to the urges to use non-prescribed substances during the postpartum period. **Aim 1**: To assess the effect of babywearing (intervention) on maternal urges to use substances within 9 months of delivery. **Aim 2**: To assess for a relationship between the total number of hours spent babywearing in the first 3 months postpartum and maternal urges to use substances.

Background: While pregnancy presents a strong motivation to seek and comply with Opioid Use Disorder (OUD) treatment, up to 80% of women relapse to non-prescribed opioid use within six months of childbirth. Moreover, fatal overdoses are now a leading cause of maternal death in the US.

Methods: We recruited mothers with a history of OUD and their newborns into the Newborn Attachment and Wellness study (within a Neonatal Intensive Care Unit in the Southwest US). Participants (N=47, *M*age=28.91; SD=5.14) represent the diversity of the region (48.9% White, 19.1% Hispanic, 12.8% BIPOC). Mothers were assigned to the intervention condition (received a baby carrier with instructions to babywear daily) or the control condition (an infant rocker chair). Interviews occurred at birth, 3, 6, and 9 months post-delivery. At each wave, participants completed a self-report measure on their strong desire or urge to use various non-prescribed substances in the last 3 months. We created a dummy score of <u>urges to use non-prescribed substances</u> at 9 months: *no urges* (0) or *any urges since delivery* (1). Approximately 68.1% of the sample had non-prescribed urges by 9 months. Across conditions, total babywearing hours within the newborn period ranged from 0 to 168, and was statistically higher among intervention mothers (M=61.41 hours, SD=41.60 vs. M=4.19 hours, SD=10.93), $t(45)=-6.51$, $p<.000$. Total babywearing hours was recoded into three meaningful groups: never babywore (0, N=18), some babywearing (1-44 hours, N=13), consistent babywearing (45+ hours, i.e., minimum of 3.5 hours per week, N=16).

Results: Two Chi-Square tests of independence were used. Condition X^2 (2, N=47) = 12.55, $p<.001$, *Phi*=.52 and babywearing category, X^2 (2, N=47)=6.75, $p=.034$, *Phi*=.38. Both significantly predicted urges to use. Mothers in the intervention condition were less likely to have urges to use: 56.5% had no urges (43.5% had urges) compared to 8.3% of control mothers (91.7% had urges). Mothers who consistently babywore had significantly fewer urges to use (43.8% had urges) compared to mothers who never babywore (83.3% had urges). There was no significant difference with the group categorized as some babywearing.

Implications for Translation to Practice and Future Research: There is a critical window during the postpartum period in which healthcare providers have the opportunity to capitalize on mothers’ desire to abstain from substance use. Babywearing, more specifically babywearing at least 30 minutes a day, reduced the risk for urges to use non-prescribed substances post-partum in women with OUD, a factor associated with relapse.

Keywords: babywearing; opioid use disorder, postpartum, urges

The Registered Nurse Experience Delivering Care to a Difficult Patient

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Background: Acute care hospital nurses provide care for patients they classify as difficult. The phenomenon of the difficult patient is acknowledged in nursing research and associated with a broad spectrum of behaviors ranging from non-compliance to physical violence. Difficult patients are associated with decreased nursing role satisfaction, perceived high burden of care, and negative coping behaviors. A patient consequence of negative coping of nurses is missed nursing care and purposeful rationing of care. Despite the recommendation from bioethicists that the etiology is multifactorial, nursing research focuses on interventions to manage the patient's behaviors. Placing the cause of the difficult patient dynamic only within the locus of patient responsibility creates an environment where the nurse is socialized to take an authoritarian approach to care with the goal of controlling the behaviors. Missing is the reflection on the nurse/patient relationship dynamics that may contribute to the difficult patient dynamic. An in-depth exploration is needed to understand the influence of the difficult patient within the context of the nurse/patient relationship and the impact on care delivery.

Methods: A qualitative descriptive approach to elicit the nurse experience providing care to patients considered difficult. Informants are acute care hospital staff nurses with experience providing nursing care to difficult patients. A purposeful sampling approach using maximum variation sampling is used to select informants with diverse characteristics. The estimated sample size at study completion is 11-20 interviews but may increase to gain consensus on developing themes. Data collection includes individual, semi-structured interviews using an interview guide, and chart review of nursing notes of patients described as difficult. Data analysis will be completed using inductive thematic analysis to create a final representation that tells a compelling story of nursing care delivery to the difficult patient.

Assessment of Findings: Pending

Conclusions/Implications: This study will contribute to nursing knowledge by exploring the implications of the difficult patient on care delivery, nursing decision making. and workflow. Future quantitative research can describe the relationships between the patient characterized as difficult and completion of acute medical treatment, discharge against medical advice, and readmission.

Mind-Body Therapy for Cardiometabolic Risk in African-Americans: A Systematic Review

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Purpose: The purpose of this review is to synthesize and summarize current knowledge of the feasibility and effectiveness of mind-body therapies on cardiometabolic risk (CMR) factors (cardiovascular disease, hypertension, obesity, diabetes, and psychosocial stress (anxiety and depression)) in middle-aged African Americans (AA). PICO: Do AA men and women who participate in mind-body therapy have a reduction in CMR factors compared to those who do not?

Background: The disproportionate rate of CMR factors that AA experience is steadily increasing. Cardiometabolic risks are risk factors that increase the risk of vascular events or diabetes. This notion includes classic risk factors like hypertension, dyslipidemia, smoking as well as obesity, inflammatory profile, socio-economic status (SES), sedentary lifestyle, and psychosocial stress. Mind-body therapies focus on the brain, mind, body, and behaviors' effect on health and disease. Mind-body therapies demonstrate improvements in CMR factors, with increased feasibility and acceptability in the general population. Less known is the feasibility and acceptability of the AA population and the evidence of a reduction in CMR factors.

Methods: Following PRISMA guidelines, an electronic search of literature published between January 1, 2012 - July 31, 2022, was conducted in PubMed, CINAHL, and Scopus utilizing the key terms: "Tai ji", "Tai chi", "Qigong", "yoga", meditative movement", "breathing techniques", "mind-body therapies", "mindfulness-based intervention", "mindfulness-based stress reduction", "cardiometabolic risk factors", "heart disease", "metabolic syndrome", "African American", "Black", "Black American." A manual search of bibliographies was conducted for additional articles. Studies were excluded if: not conducted in the U.S., not in English, published before 2012, not an experimental or mixed methods (with an experimental arm) design, participants were younger than 18 years old, not intervention-based, did not include a physical aspect of mind-body therapy (e.g., yoga, breathing exercises, Tai chi, Qigong), did not study African Americans, did not target CMR factors or psychosocial stress (anxiety or depression) as outcomes. Independent reviewers (DAM, JH) selected articles for inclusion, data extraction, and assessed bias. The group consensus was discussed between DAM and JH, with a third reviewer available to resolve any disagreement.

Results (n= 14): Publication dates 2012-2022; location U.S.; design RCT (7, 50.0%); single-arm (4, 28.6%); mixed methods (3, 21.0%); sample size (17 - 375); age range 43-64; gender, female (6, 42.8%), male and female (8, 57.1%); outcomes assessed; obesity, depression, anxiety, stress, metabolic syndrome, cardiovascular disease, diabetes, diet and physical activity. Theoretical framework/model (4, 28.6%); culturally adapted (7, 50.0%); studies with statistical significance (8, 57.1%); studies found to be feasible and acceptable (7, 50.0%).

Implication: Mind-body therapies can successfully modify CMR factors in the AA population. Acceptability and feasibility of mind-body therapies have been validated in middle-aged AAs with CMR factors. Recommendations for future research include greater recruitment of AA men for mind-body therapy studies, larger sample sizes, and utilizing culturally adapted interventions for engaging AAs in mind-body therapies for a reduction in CMR factors.

The Effect of Weighted Blankets on Agitation in the Adult, Inpatient Population

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The purpose of this study was to investigate the effect of weighted blankets as an intervention on the agitation scores on adults in the in-patient setting. Neuro Trauma patients may experience aggression, agitation, anxiety, personality changes and inappropriate behaviors. Agitation may escalate to aggression necessitating increased care needs, prolonged hospital stays, and an increased risk to the safety of the patient and care team. The use of weighted blankets has been used to decrease anxiety in adults and children and is being used by many as a sleep aid. The weighted component of the blanket delivers deep pressure touch stimulation (DPTS). The theory underpinning the use of DPTS is based on the assumptions of sensory integration (SI) theory. In SI theory, modulation of the central nervous system's processing of sensory information results in a calming effect. DPTS is believed to influence reticular formation activity resulting in a direct effect on autonomic activity. DPTS influences both parasympathetic activity through increased vagal tone, reflected by increased parasympathetic activity inducing calmness and reducing sympathetic activation (fight or flight) through reduced activation of the stress response. The deep pressure touch stimulation provided by a weighted blanket may provide a low-risk intervention to decrease agitation and prevent escalation.

This was an experimental design, pilot study. A convenience sample of Neuro Trauma patients was used for this study. The Primary RN assessed the patients that began exhibiting agitation behaviors by using the Agitation Behavior Scale (ABS). The Primary RN notified a member of the research team who determined patient eligibility through inclusion/exclusion criteria. For those that met inclusion criteria, a fact sheet about the potential benefits of weighted blankets was provided to the patient and/or any family that were present. Written signed consent was not obtained. The patient could refuse at any time. Vital signs (respirations, heart rate, blood pressure) were obtained pre-intervention. The Primary RN or member of research team applied a weighted blanket for 30 minutes. At the end of the intervention, the Primary RN or member of research team repeated the ABS and vital signs**.** The data was collected and placed into a lock box. The blanket was placed in a separate linen cart for laundering. The average ABS score pre-weighted blanket intervention was 20.7 with a post-intervention score of 17.4. The pre-intervention standard deviation was 7.4 with the post-intervention standard deviation of 15. This showed to be statistically significant with a p- value of 0.006.

The limitations of the study included Covid-19, staffing challenges, laundering and patient exclusion criteria. Changes for implementation will be to modify portions of the exclusion criteria and have single-use blankets. Our long-term goal will be to provide comfort, decrease agitation, and provide an adjunct therapy for patients. Possible future nursing implications will be to decrease restraints, companion usage, and length of stay. Our pilot study revealed positive results, but a randomized control trial is needed to demonstrate the true effectiveness of the weighted blanket intervention.

The Impact of Simulation on Self-Efficacy and Intent to Counsel Patients about Vaping

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Purpose: To evaluate the use of simulated patient scenarios to impact pre-baccalaureate student nurses' self-efficacy and intent to counsel patients about issues related to vaping.

Background: The role of the nurse includes education, health counseling, and health promotion. Vaping has become a major factor in public health. Approximately 14% of high school students and 4% of middle school students in the United States vape. Studies have shown that undergraduate nursing curricula lack adequate information about vaping. Health care students report a perceived lack of instruction, confidence, and experience providing counseling about smoking cessation. Students have less confidence and experience discussing vaping. Nursing curricula should be evidenced-based, teaching not only knowledge, but skills and attitudes necessary to help students perform successfully in clinical settings. Simulation is an evidence-based teaching-learning method. There were previously no known studies evaluating the use of simulation specifically for teaching students to counsel patients about issues related to vaping.

Methods: This study used a quasi-experimental, one group, pre-test, post-test design. Ninety-four nursing students were recruited using convenience sampling from a pre-baccalaureate nursing program. The students watched an educational video with information about vaping and participated in a simulation intervention. Groups of six to 10 participants took a pre-test, participated in four simulated patient scenarios about counseling for vaping issues, and took a post-test. The dependent variables measured were self-efficacy and intent to counsel. The variables were tested using the paired samples *t*-test and Pearson's correlational coefficient.

Assessment of Findings: Eight null hypotheses were tested. Four looked for differences in measurements of the variables between pre- and post-intervention data. Four explored potential relationships between the variables. Analyses revealed statistically significant findings for all eight hypotheses. The intervention strengthened the participants' self-efficacy related to counseling and their intent to provide counseling about vaping. Participants also reported increased confidence in knowledge although no new knowledge was provided during the intervention. Participants reported a change in their perception of the role of the RN related to counseling and in their own opinions and attitudes about vaping as a result of the simulation. Self-efficacy was found to be the strongest predictor of whether a health care provider will provide counseling.

Conclusions/Implications, and Recommendations: The study teaching-learning strategy was effective, could address the identified curriculum gap, and is in line with current active teaching practices in higher education. In clinical practice, stronger graduate nurses could enhance the ranks of practicing nurses as they enter the workforce benefitting both patients and colleagues. The study methods would easily translate to professional education for nurses. Practice settings play a role by creating policy that includes vaping as part of every assessment and intake in the same way that cigarette smoking is included. Health care systems must include vaping in patient forms/electronic charting, diagnostic groups, patient protocols, and as topics of in-service for staff. A future recommendation would be to replicate the study with an increased time between the pre- and post-test and an opportunity for students to counsel patients in a clinical setting.

Opioid Use Disorder, Anxiety and Chronic Pain Among Smokers in a Tobacco Cessation Study

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Purpose: This project will gather preliminary data regarding the potential impact of opioid use disorder (OUD), anxiety, and chronic pain (CP) on tobacco abstinence among participants enrolled in a tobacco cessation study, and inform a future feasibility trial aimed at developing a Tai Chi Easy (TCE) intervention for opioid dependent smokers with anxiety and CP.

Background: OUD is a public health crisis that causes more than 130 deaths daily, costs over $78 billion annually, and disproportionately affects persons with CP, tobacco dependence, and anxiety. Opioid dependent smokers' mortality rates are four times higher compared to non-smokers. Interventions that treat the overlapping symptoms of anxiety, pain, and tobacco dependence, concurrently, may improve outcomes among individuals with OUD. There is a small but growing body of literature demonstrating that mind-body therapies (e.g., mindfulness, acupuncture, tai chi) help reduce opioid use and anxiety, improve pain severity, self-efficacy, perceived stress, quality of life, and reduce smoking. Unique to other mind-body therapies, TCE is multi-component mind-body therapy that includes the four essential Vitality Methods: 1) Gentle movement, 2) Breath practice, 3) Self-massage, and 4) Meditation. However, the acceptability of TCE to ameliorate anxiety and pain symptoms among opioid dependent smokers is not known. This project addresses this gap by examining the acceptability of a TCE intervention for smokers with OUD, CP, and anxiety.

Methods: Secondary data analysis from 3-month self-report assessments collected as part of an ongoing tobacco cessation clinical trial (R01AT011500; J. Gordon, PI) will be conducted, to describe the incidence and prevalence of co-occurring OUD, anxiety, and CP (e.g., anxiety severity, pain intensity, previous treatment, severity of dependence, and opioid misuse) among 200 study participants. A new holistic theoretical framework--Complexity of Opioid Use Disorder Model--will guide this project, to examine whether these co-occurring disorders at 3-months predict smoking cessation treatment outcomes at 6-months. In addition, to assess the acceptability of TCE for adult smokers with OUD, CP, and anxiety; 20 participants from the clinical trial will participate in individual, semi-structured interviews to collect data about their perceptions of TCE and solicit suggestions for adapting the TCE intervention. Quantitative data will be analyzed using logistic and linear regression and Crist and Tanner's five interpretive phases will be used to analyze the qualitative data.

Outcomes: This project will primarily focus on the potential impact of OUD, anxiety, and pain on tobacco abstinence among participants in a clinical trial. Secondarily, the study will assess the acceptability of TCE among a sample of smokers who report OUD, anxiety, and CP. Results from this study will identify the adaptations needed to conduct a feasibility trial to test an innovative integrative approach (i.e., TCE) for smokers with OUD, anxiety, and CP.

Implications: Results from this project will lay the foundation for a feasibility trial to test an innovative integrative approach for opioid dependent smokers with anxiety and CP. There is little research of the co-occurrence of OUD, CP, and anxiety, and results from this study will provide critical data for developing interventions for this complex population.

Vaccine Information Statement Usage in Utah: Parental Reports

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Objective: Little is known about parental perceptions of usage and delivery of vaccine information statements (VIS), the timing of VIS delivery, the opportunity to read VIS, and the time for discussing VIS content with a provider. This study explores parental reports of dissemination and use of VIS, including parental use, experience, and perceptions.
Method: Data for this pilot cross-sectional descriptive study were collected via an online survey. The instrument consists of 21 questions, including five demographic questions, eleven describing VIS distribution, four about parental use and understanding of VIS, and one open-ended question regarding information sources about immunizations. The questionnaire was available in both English and Spanish.
Results: Responses from 130 parents in one school district were analyzed. Most participants (67.7%) reported that their child received their vaccines from a pediatric healthcare provider. A large majority of participants (71.5%) said a VIS was included in the vaccination process and received a paper copy (64.6%). About a third of participants (37.7%) said they read some or all of the VIS before their child was vaccinated, and over half (59.3%) said they read some of it or all of it after their child was vaccinated.
Discussion: While it is promising that many received the federally mandated vaccine information, over a quarter of parents did not receive the information required. Similar to current literature, most parents read all or part of VIS after an immunization appointment. Limited time to read and comprehend information on VIS before an immunization may limit parental understanding. Although some parents reported struggling to understand a VIS, more than half of the parents in our study said VIS were helpful and that they would read another in the future.
Nursing Implications: Without appropriate use of VIS and other vaccine education material, providers miss the opportunity to educate parents on the risks and benefits of vaccinating their children.
Conclusion: Since their implementation in 1986, there has been little research on VIS use for vaccine education and parental perception. VIS are a valuable tool to educate patients and parents on the benefits and risks of vaccines, and work needs to be done to improve wording and dissemination practices. Nurses and nurse practitioners must be aware of literacy levels and vaccine attitudes and create appropriate opportunities for parents to read and learn about vaccines.

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NICU Admission and Maternal Mental Health Diagnoses in the US, 2010-2018

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Maternal mental health (MH) conditions represent a leading cause of preventable maternal death in the US. Neonatal Intensive Care Unit (NICU) hospitalization influences MH symptoms among postpartum women, but a paucity of research uses national samples to explore this relationship. Using national administrative data, we examined rates of MH diagnoses of anxiety and/or depression among those with and without an infant admitted to a NICU between 2010 and 28 2018. Using generalized estimating equation models, we explored the relationship between NICU admission and MH diagnoses of anxiety and/or depression, secondarily examining the association of a NICU length of stay and race/ethnicity with MH diagnoses of anxiety and/or depression post NICU admission. Women whose infants became hospitalized in the NICU for <2 weeks had 19% higher odds of maternal MH diagnoses (aOR:1.190, 95% CI:1.14-1.24), and those whose infants became hospitalized for >2 weeks had 37% higher odds of maternal MH diagnoses (aOR: 1.37 95% 34 CI: 1.128-1.47) compared to those whose infants did not have a NICU hospitalization. In adjusted analyses, compared to white women, all other race/ethnicities had a significantly lower odds of receiving a maternal MH condition diagnosis [Black (aOR=0.76, 0.73-0.08), Hispanic (aOR=0.69, 37 0.67-0.72), and Asian (aOR:0.32, 0.30-0.34)], despite higher rates of NICU hospitalization. These findings suggest a need to target the NICU to improve maternal MH screening, services, and support, while acknowledging the influence of social determinants, including race and ethnicity, on health outcomes.

Funding: Study conducted while I was a postdoctoral fellow with the National Clinician Scholars Program, as a VA Quality Scholar.

Parents of Young Children with Eyeglasses: Experiences, Challenges, and Successes

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Aim: The goal of the study was to learn about experiences, challenges, and successes of parents of young children (1-5 years old) who have been prescribed eyeglasses.

Background: Vision problems in young children can significantly affect development and learning. Advances in vision screening technology and the implementation of routine instrument-based screening in the medical home have led to the detection and early treatment of vision problems that, in the past, might not have been identified until children were older and, perhaps, less responsive to treatment. Instrument-based vision screening is now recommended at well-child checks beginning at age 1 year. However, currently, there is little information in the literature on the impact of eyeglass treatment and compliance with eyeglass wear in children younger than 3 years.

Methods: The research team developed and conducted an online survey of parents with children 1-5 years of age who have been prescribed eyeglasses. Informed consent was obtained prior to parents' participation. The study team posted general study invitations in online communities for parents of children in the study range. Parents then contacted the study team for more information and an individual survey link with which to participate. Participants received a gift card as compensation.

The survey has a total of 8 sections: consent and eligibility, social/environmental (child's age, gender, number of siblings, social support from family and others, child's age when first received eyeglasses, child's frequency of eyeglass wear, and parent's level of education), and eye and vision history (amount and type of refractive error, presence of non-refractive error vision problems, and visual acuity). Another survey section is the Amblyopia Treatment Index (ATI), which assesses the impact of eyeglass treatment on the child and family (Cole SR, et al, 2001). The survey also included a section with questions derived from the Infant Toddler Temperament Tool (IT3)-Toddler version developed by the Center for Early Childhood Mental Health Consultation.

Assessment of Findings: The study was conducted from October 2020 to May 2021. The final sample will include survey responses from 104 parents. Data analysis is currently in progress. Results will summarize the demographic characteristics of study participants and their families and characteristics related to the child's eye history and refractive error. Analysis will assess whether social/environmental factors, visual factors (ocular history, refractive error), child characteristics (age, gender, race, temperament), and parents' attitudes and beliefs are associated with the frequency of eyeglass wear. Open ended survey questions will be analyzed using content analysis.

Implications that emphasize next steps: Understanding parental perceptions and children's experiences with eyeglasses might elucidate patterns of compliance in this age group. The study results may also aid pediatric nurses who encounter young children with vision care needs and will provide valuable information for school nurses, parents and teachers on how to best support these children.

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Parental Vaccine Hesitancy and the COVID-19 Vaccine: A Scoping Review of the Literature

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Purposes/Aims: The aim of this scoping review was to assess and understand the extent of the knowledge on parental vaccine hesitancy in the United States related to the COVID-19 vaccine. A review was conducted to understand the concept of parental vaccine hesitancy and any emerging trends in this issue during the pandemic and to add to the science for addressing parental vaccine hesitancy.

Background: Parental vaccine hesitancy has been a hotly debated issue long before the COVID-19 pandemic. Still, the emergence of a new vaccine during this public health crisis made even pro-vaccine individuals reconsider COVID-19 for their children. With constantly changing information being disseminated through many modes of communication, misinformation and disinformation were both prevalent and previous models of vaccine hesitancy might need modification.

Methods: A scoping review, aided by a research librarian, was guided by the Joanna Briggs Institute (JBI) guidance for evidence synthesis five-stage framework and following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist. The literature review utilized the bibliographic databases PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, and PsychInfo to search for research and gray literature primary sources of evidence from 2019-2022. Keywords used were “vaccine hesitancy OR “vaccine misinformation” OR “vaccine disinformation,” “COVID-19 vaccine,” “SARS-CoV-2,” “child*,” and “United States.” Two reviewers initially extracted the data using Covidence systematic review software. A third reviewer will provide a third level of extraction through an iterative process to finalize key information relevant to the review’s aim.

Results: The search resulted in 546 articles for screening, with a final 68 deemed relevant for this scoping review of parental vaccine hesitancy related to the COVID-19 vaccine for their children. Results are in progress; data analysis is being conducted with mapping to the concepts of the socio-ecological model. The concepts in this model organize parental vaccine hesitancy into four system levels: interpersonal, intrapersonal, institutional, and community policy levels.

Conclusion: In the future, the effort to address misinformation and disinformation about vaccines should include a formal nationwide plan to disseminate science-based information and coordinate with public health systems at the state and Federal levels. Policies regarding pediatric vaccine requirements, especially in educational systems, during pandemic outbreaks should be established and fine-tuned based on what was learned during the COVID-19 pandemic years.

Implications for Nursing Practice/Research: This review will provide nurses insight into why parents were hesitant towards the COVID-19 vaccine. They can then utilize methods that acknowledge those fears and communicate with parents with evidence-based information. Nurses are in an excellent position to have conversations and provide evidence-based information to help parents make the best health decisions for their children.

Breastfeeding and Postpartum Hemorrhage: A Secondary Analysis of a Case-Control Study

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Purpose/Aim: The aim of this secondary analysis is to determine whether breastfeeding outcomes differ between individuals who experienced a postpartum hemorrhage during childbirth and matched control participants. Specifically, we will compare rates of exclusive breastfeeding assessed at 6 weeks, 4, 6 and 12 months postpartum, timing of formula introduction, and timing of weaning.

The secondary aim is to compare commonly given reason(s) for breastfeeding cessation between postpartum hemorrhage cases and control participants.

Rational/Background: Postpartum hemorrhage after both vaginal and cesarean births, most often attributed to uterine atony, remains a leading cause of U.S. maternal morbidity, and is increasing, especially among induced labors. For infants, a leading cause of morbidity and mortality is suboptimal breastfeeding, with only a quarter of U.S. infants receiving the recommended six months of exclusive breastmilk. Outside of pituitary necrosis from severe blood loss preventing lactogenesis, few studies have examined the potential downstream effects of postpartum hemorrhage on lactation or breastfeeding. One plausible connection between postpartum hemorrhage due to uterine atony and breastfeeding is that both depend on oxytocin system mechanisms. Alternatively postpartum hemorrhage may impact lactation through resulting anemia, hypovolemia, or subsequent treatments for blood loss. Thus, this study fills a gap in knowledge by exploring a potential link between postpartum hemorrhage and breastfeeding outcomes.

Methods: This secondary analysis will utilize data from participants who experienced a postpartum hemorrhage (n=69) from uterine atony following vaginal birth matched to control participants who experienced physiologic blood loss after birth (n=50). Participants were matched on parity and labor induction. Medical record information detailing birth events were abstracted along with self-reported lactation/breastfeeding surveys across the first postpartum year. Bivariate statistics will be used to test differences in exclusivity and timing of formula introduction between the groups. We will also estimate the relative risk for early cessation of breastfeeding using linear and Poisson regression models and time-to-event, Kaplan-Meier survival curve analysis. Covariates independently influencing breastfeeding will be considered for inclusion in the models. Additionally, we will include measures of maternal anemia and birth characteristics such as oxytocin utilization; other comorbidities will be considered.

Findings/Conclusion: Findings will be presented via poster at WIN, and a manuscript will also be written during Spring of 2023.

Implications for Further Research: This study aims to provide preliminary data regarding the relationship between postpartum hemorrhage and breastfeeding outcomes. This is a first step in an investigation of the connection between perinatal complications and breastfeeding and lactation outcomes. We hope that this research will generate further hypotheses for testing in larger prospective studies.

Feeding Dysregulation on Breastfeeding Duration and Later Autism Diagnosis

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Purpose/Aims: Even though it is well known that older children with autism are five times more likely to have feeding difficulties compared to their typically developing peers, few studies describe how children with autism fed in infancy. This study uses the National Survey of Children's Health (NSCH) to investigate the association of feeding dysregulation with duration of breastfeeding in children with autism and timing of autism diagnosis.

Rationale/Background: Earlier identification of autism continues to be a national priority as the average age of autism diagnosis in the United States is 3 to 6 years old when most children can be reliably diagnosed around 2 years of age. Identifying earlier behaviors of autism can aid in earlier diagnosis and referral for developmental intervention, which if started before age 3 years can have a significantly positive impact on a child's school and life outcomes. Despite the known feeding difficulties in older children diagnosed with autism, our knowledge about infant feeding behaviors in children who later develop autism is very limited. Identifying infant feeding behaviors that might predict the risk of autism has the potential to decrease the average age of autism diagnosis.

Methods: Using 2019-2020 NSCH data, the rates of autism by selected demographic characteristics were calculated for eligible participants (3-17 years old). Survey logistic regression and survey regression approaches were used to examine the association of feeding dysregulation with diagnosis of autism and with time when breastfeeding ended respectively. All analyses were weighted using the weighting variable provided by NSCH to account for the complex sampling design of the NSCH and to provide national estimates.

Outcomes: Among the 61,134,178 children (3-17 years) assessed for autism, there were 1,790,081 (2.93%) children with the diagnosis of autism. After adjusting for potential confounders, children with feeding dysregulation in the past 6 months were 5 times more likely to be diagnosed with autism [Adjusted odds ratio (AOR)= 5.0, 95% C.I. (3.1, 8.0)] than children without feeding dysregulation. Children with feeding dysregulation ended breast feeding 1.54 months earlier than children without feeding dysregulation, but this association did not reach a statistically significant level.

Conclusions/Implications: These results warrant further research on feeding dysregulation in infancy to determine if these behaviors contributed to decreased breastfeeding duration in children later diagnosed with autism. Because primary care providers are at the forefront of assessing infant growth and development, identifying dysregulated feeding behaviors in infancy may serve as additional surveillance for primary care providers in identifying children with autistic behaviors at a younger age. This earlier identification can aid in referral for intervention and diagnosis to help improve life outcomes for children with autism.

Feeding Behaviors in Infants and Toddlers Diagnosed with Autism: A Systematic Review

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Purpose/Aims: Children diagnosed with autism are five times more likely to have feeding difficulties as compared to their typically developing peers. Most studies on the feeding characteristics of children with autism focus on characteristics observed after the age of 2 years old or after the diagnosis of autism is obtained. The purpose of this study is to systematically review the literature on feeding characteristics of children aged 0-24 months who were later diagnosed with autism.

Rationale/Background: Diagnosis of autism can occur reliably around 24 months of age, but the average age for diagnosis ranges from 3 to 6 years old in the United States despite routine autism screening at 18 and 24 months. Despite known associations of feeding difficulties and autism, no current autism screening tools for use in the primary care setting evaluate feeding behaviors. Little is known about which feeding behaviors primary care providers should monitor for and which ones may warrant consideration for inclusion on future autism screening measures, thus supporting early screening and identification.

Methods: This systematic review is utilizing PRISMA guidelines. Using selected key words, a search was conducted using PubMed, PsycInfo, and CINAHL databases for relevant articles with no limitations on publication date. A total of 1,066 articles were identified and after removing duplicates (n=269), the title and abstract of 797 articles were screened and 95 articles were selected for full text review. Two independent reviewers selected 21 articles for data extraction. References for each selected article have been examined and reviewed for additional applicable articles. Data extraction, determination of quality of the articles selected, and evaluating risk of bias is currently underway.

Outcomes: Selected articles chosen include feeding behavior characteristics or prevalence of feeding difficulties at ages 0-24 months in autistic children. The selected studies have a publication range from 1988 to 2022. In all studies combined, the number of participating children with autism is 4,687. Of the selected studies, 7 were conducted in the United States while 14 were conducted outside of the United States.

Conclusions/Implications: Although these studies show results that infant feeding characteristics may be different in children later diagnosed with autism, the small number of studies on this topic makes it difficult to make conclusions as there are many components of infant feeding that need to be studied, including breast, bottle, and solid food feeding. There is inconsistency in the terms used to describe feeding difficulty in infants with autism and a lack of validated measures to compare feeding behaviors across infants of varying ages and feeding type in this population. If measures are developed and further research supports that infants later diagnosed with autism do present with feeding difficulties in infancy, it may allow to expand screening questions on developmental questionnaires to include infant feeding and aid in earlier surveillance of autistic behaviors in the primary care setting.

Effects of an App on Depression in Parents of a Chronically Ill Child: A Pilot Study

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Purposes/Aim: The purpose of this pilot study was twofold: 1. determine usability and feasibility of a mindfulness app in parents of a child with medical complexity and 2. Describe the effects of a mindfulness app on depression scores.

Background: Medical advances in the last half-century created a dramatic change in the prevalence of childhood-onset diseases. The estimated prevalence of children with medical complexity (CMC) ranges from 1% to 5% or approximately 680,000 children depending on the definition. Parents of CMC experience worse mental and physical health outcomes compared to parents of healthy children. It is well documented that these parents experience high levels of stress and depression. Over 60% of parents of a child with chronic illness experience depression compared to 10% in mothers of healthy newborns.

Methods: Parents were recruited through a local non-profit organization aimed at supporting parents of medically fragile children. Parents were emailed a link to more detailed information about the study, the consent, and baseline questionnaire. The baseline questionnaire consisted of 12 demographic questions and Patient Health Questionnaire (PHQ-9). After completing the baseline questionnaire, instructions on how to download the mindfulness app, Smiling Minds, was sent to parents. They were reminded to use it for at least 10 minutes for 4 times a week. Parents received weekly reminders and questionnaires that included 8 usability questions as well as the Perceived Stress Scale (PSS). The final questionnaire consisted of the PHQ and 9 usability and feasibility questions.

Findings: Twelve parents agreed to participate in the study and filled out the baseline questionnaire. The majority of parents (n = 10, 77%) completed the study, while three parents dropped after completing the baseline questionnaire. Overall, parents used the apps 3.4 days/week (SD = 1.4, Mdn = 3) for a minimum of 10 minutes. The mean depression scores decreased from baseline (M= 13.2) to 4 weeks (M= 10.0).

Conclusions/Implications: This was one of the first studies to examine the feasibility and efficacy of a mindfulness app in this unique population. The results of this pilot study are consistent with other mindfulness app studies. The results suggest that using a mindfulness app may be a feasible intervention to decrease depression scores in parents of a child with medical complexity; however, future research with diverse and larger samples sizes is needed. Using a mindfulness app is a simple and cost effective intervention that pediatric nurses and providers can recommend to parents during visits.

Single Ventricle Heart Disease, Creation of a Morbidity and Mortality Readmission Tool

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Purpose: To further understand the intersection between single ventricle heart disease (SVHD) and rurality as it relates to morbidity and mortality through big data analysis looking at relationships between primary pre-discharge health status factors and interstage morbidity and mortality through the creation of a readmission risk prediction tool.

Aim 1: Compare infants living in rural versus urban dwellings during the interstage-period using a) immediate pre-discharge health status factors**,** as indicated by: 1) cardiopulmonary bypass times; 2) extracorporeal membrane oxygenation; and 3) baseline O_2 saturations, weight gain, and mode of feeding; and b) interstage-period mode of feeding, changes in the mode of feeding, O_2 saturation patterns, and total weight gain.

Aim 2: Assess infants for the duration of the interstage-period on mortality and morbidity as indicated by reported death, recorded adverse events, re-hospitalizations, and emergency room or urgent care visits.

Rationale/Conceptual Basis/Background: A morbidity and mortality risk prediction tool for readmission using the infant's physiology and hospital course is needed because minority infants with SVHD living in rural areas are understudied. Additionally, this study can potentially increase understanding of the immediate pre-discharge risk stratification profile and its association with interstage morbidity and mortality in combination with increasing clarity around the impact socioeconomic status and social determinants of health have on infant morbidity and mortality. This study aims to improve interstage, culturally appropriate care coordination. Improved care coordination has the potential to impact survival outcomes and make a significant contribution to practice.

This research is innovative because it is one of the first to seek to develop a morbidity and mortality risk prediction tool for readmissions for infants with SVHD during the interstage-period, aiming to increase survival. It will examine the disproportionate morbidity and mortality rates for patients who reside in rural communities, and it will create more equitable care for rural and small village residing patients during the interstage.

Methods: Data collection in progress

Research design: a quantitative descriptive study using secondary data analysis using two datasets: Pediatric Acute Care Cardiology Collaborative (PAC3) and the Pediatric Cardiac Critical Care Consortium (PC4). The intent is not to compare findings from the two datasets with comparative analyses. The study will explore the differences in the clinical characteristics and mortality between rural and urban infants with SVHD who status-post stage one repair and pending stage two. The study will examine the association between infant mortality and predictor variables through univariable and multivariable Cox proportional-hazard regression models.

Assessment of Findings/Outcomes Achieved: Hypothesize results will demonstrate the immediate predischarge health status factors increase and predict the risk of morbidity and mortality during the interstage period and that infants with more hospital-based physiologic factors will have an increased risk of death and adverse events, more readmissions, and emergency room visits.

Conclusions/Implications: If differences in morbidity and mortality are found between infants discharged in rural compared to urban communities, future studies will help to address factors contributing to this disparity. These disparities include healthcare access, parental preparation for care management, and formal communication efficacy.

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Outpatient Screening of Patients at Risk for Peripheral Artery Disease

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Background: Peripheral Artery Disease (PAD) is a prevalent chronic vascular disease that remains frequently under diagnosed. PAD affects up to 20% of people 60 years or older and nearly 50% of people 85 years or older (Firnhaber & Powell, 2019). The odds of developing PAD increases with the presence of each additional risk factor - 1.5 fold increase for one risk factor and up to 10 fold increase for three risk factors (Firnhaber & Powell, 2019). PAD can be an indicator of systemic atherosclerosis such as coronary artery disease and cerebrovascular disease (Campia et al, 2019). Undiagnosed obstructive PAD contributes to significant cardiovascular sequelae such as claudication, ulcers, infections, and amputations (Campia et al, 2019). Ankle Brachial Index (ABI) is a noninvasive measurement and screening tool that can serve as a prognostic marker for PAD in the absence of acute symptoms. Early identification of PAD without claudication can prevent deterioration by promoting intervention and lifestyle modifications.

Purpose of Project: Improve PAD screening of high-risk individuals in an underserved outpatient cardiology center. Identification of asymptomatic patients with either risk factors, positive physical exam findings, or both, that may indicate the presence of PAD. The purpose of this project is to improve the utilization of ABI measurements, when clinically indicated, to facilitate earlier interventions for patients at risk for obstructive PAD, thereby reducing long-term sequelae.

Evidence-Based Intervention/Benchmark: The literature supports the utilization of the American Heart Association (AHA) PAD guideline. Clinical staff will receive one-on-one training on the use of the AHA PAD guideline in order to ensure appropriate ordering of ABI screening. Program success will be evaluated by conducting a follow-up after three months of program implementation. Assessment will include the frequency that ABI measurement was utilized and the number of positive screens that resulted in interventions consistent with the 2016 American Heart Association PAD Guideline.

Evaluation of Results: Pre-intervention, retrospective, baseline data will be collected for a period of three months (July 2022 – September 2022) with a goal sample size of 100 patients (n=100), for comparison against the intervention group. Three months (October 2022 – December 2022) of post intervention data will be collected to assess for adherence to the guideline, with a goal sample size of 100 patients (*n* = 100). The findings should demonstrate a minimum of 10% improvement in PAD screening for high-risk individuals with signs of PAD in the absence of claudication. The findings should also demonstrate improvement for PAD screening while meeting the AHA PAD clinical criteria and practice guideline.

CHRONIC ILLNESS

Pulmonary Artery Pressure Sensor Data Transmission: A Quality Improvement Project

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Introduction: An implantable pulmonary artery pressure (PAP) sensor is a novel technology that allows for remote monitoring of changes in the intracardiac pressures and management of heart failure (HF). A provider's ability to detect the changes in pressures makes early adjustment of medications before symptom onset possible. These sensors reduced HF-related hospitalization and emergency room or urgent care visits by 21-36%. This outcome is only possible if a patient is compliant with daily data transmission, however, no data are currently available focusing on patient compliance.

Purpose: This quality improvement project aims to determine the effectiveness of weekly email in improving patients' compliance for data transmission from implanted PAP sensor.

Methods: The Advanced Heart Failure Team at Banner University Medical Center – Tucson (BUMCT) developed interventions to increase patient compliance with daily data transmission and for meet accurate nursing documentation. The interventions included: 1. Each patient received a weekly summary via email that include individualized pulmonary artery pressure trend, heart rate, and data transmission compliance rate. These values were also documented in each patient's electronic medical record. 2. Patients received a call when there were missed data transmissions for two consecutive days or when pressure values outside of their individualized goal.

The compliance rate was calculated by the percentage of transmitted values in the preceding month. The baseline compliance rates were from August 2020 to March 2021, the weekly email started in March 2021, and the post-intervention data were trended monthly and annually.

The 30-day HF-related readmission rate was obtained from the Centers for Medicare and Medicaid Services (CMS) hospital compare website.

Results: The baseline compliance rate from August 2020 to March 2021) before implementation was 51.4%. After the intervention, there was an immediate rise in the compliance to 58.9% in April 2021. The latest data from May 2022 showed a sustained compliance rate at 60.2%. The compliance rate for patients with newly implanted sensors since March of 2022 was 97.1%. The compliance rates were 51.3% and 59% for the years 2020 and 2021, respectively. The 30-day HF-related readmission rate for years 2020, 2021, and 2022 (up to date) were 16.4%, 15.33%, and 14.57%, respectively. Since the baseline period, no HF patients with sensors expired due to acute decompensation.

Although increasing compliance was the primary goal of this project, feedback from other healthcare providers and patients suggested that the interventions increased transparency of care and increased health literacy and self-care. Providers also reported using the values from PAP sensor for medical decision-making and managing medications. Patients endorsed improved understanding and significance of the pressure changes and were able to correlate them with their symptoms, diet alterations, and medication changes. Lastly, the patients became proactive in their partnership in their healthcare team by communicating any changes in medications, inability to transmit due to various reasons, and self-care measures.

Conclusions: Weekly email improved the data transmission compliance, self-care, and transparency of care of patients implanted with PAP sensors. Further studies are needed to validate the results and generalizability of this quality improvement project.

Dysphagia, Malnutrition, and Health Perception in Heart Failure

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Purpose/Aims: This analysis was to compare overall health and malnutrition in heart failure (HF) patients with and without dysphagia in a large cohort of patients enrolled in the “All of Us” study. Analyzing dysphagia and outcome data in the “All of Us” cohort would provide a unique opportunity to understand health burden of patients living with heart failure in a broader context.
Background: Patients with cardiac cachexia have two to three times increased mortality rate compared to those without cardiac cachexia. Dysphagia-Malnutrition-Cardiac Cachexia is a vicious cycle that can affect the prognosis of patients with heart failure. Dysphagia can also increase the risk for aspiration pneumonia regardless of diagnosis.
Methods: This was a retrospective analysis of “All of Us” data of patients with heart failure (HF) with and without dysphagia. Patients’ nutritional measurements include serum albumin level, body weight, and body mass index (BMI). Patients’ health perception was evaluated by the Overall Health survey. The health variables of interest included general health, physical health, and mental health. These ordinal variables are rated as excellent, very good, good, fair, and poor.
Outcomes: Among 14,424 patients with heart failure, 2,969 (20.5%) were diagnosed with dysphagia. The average left ventricular ejection fraction for patients with dysphagia and those without dysphagia was 45.74 and 43.09 respectively ($p < 0.001$). Although there was no significant difference in BMI in patients with dysphagia compared to those without dysphagia (32.1 vs. 32.8 kg/ kg/m^2, $p < 0.001$), there was a significant difference in weight (89.3 vs. 93.5 kgs, $p < 0.001$) and serum albumin level (25.1 vs. 28.8 g/dL), $p < 0.001$). They also reported significantly lower ratings for their general health, quality of life, physical health, and mental health than those without dysphagia.
Conclusions: HF patients with dysphagia are significantly malnourished and have poorer health perception compared to those without dysphagia. Additional research is needed to develop and test effective interventions to improve health outcomes for heart failure patients with dysphagia.

Intracardiac Pressures and Malnutrition in Heart Failure: A Retrospective Study

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Purpose: The purpose of this retrospective study is to examine the relationship between intracardiac pressures and anatomy and the nutritional status of patients in heart failure.

Background: Dysphagia-Malnutrition-Cardiac Cachexia is a vicious cycle that can affect the prognosis of patients with heart failure. Patients with cardiac cachexia are two to three times more likely to die compared to those without cardiac cachexia. Results from two retrospective analyses from "All of Us" showed that patients with dysphagia have lower body weights and serum albumin levels (Velasco, et al., 2022; Velasco, et al., 2022). They also have a poorer perception of their general, physical, and mental health and have worse quality of life and fatigue compared to patients without dysphagia (Velasco, et al., 2022a; Velasco, et al., 2022b). Surprisingly, the average ejection fraction for patients with and without dysphagia was 45.74 and 43.09, respectively (Velasco, et al., 2022b). There were also no significant differences in the body mass index (BMI) between those with and without dysphagia (Velasco, et al., 2022b). We hypothesize that elevated intracardiac pressures and large left ventricular internal end-diastolic diameter (LVIDD) have direct relationship with dysphagia.

Methods: This is a single-center, retrospective, correlational study. Patients aged 18 to 75 years old diagnosed with heart failure and implanted with a pulmonary artery sensor in 2021 are included. The presence of dysphagia, serum albumin level, body weight, BMI, left ventricular ejection fraction (LVEF), LVIDD, and intracardiac pressures will be obtained through chart review. Application to the Institutional Review Board (IRB) was submitted and currently undergoing review prior to approval.

Anticipated Results: We anticipate that heart failure patients who were implanted with a pulmonary artery sensor with dysphagia have higher pulmonary artery pressures, intracardiac pressures, and LVIDD are more malnourished compared to those who do not have dysphagia.

Significance/Implications for Translation to Practice/Further Research: Findings from this study may lead to the development of a low-cost, non-invasive assessment tool to identify patients at risk for dysphagia and malnutrition. The presence of dysphagia may be a warning sign in patients with heart failure and may be suggestive of impending decompensation. Early recognition warrants prompt referral for services including volume management, dietary counseling and intervention, and speech therapy. Additional research is needed to improve general health and quality of life in patients with heart failure.

CHRONIC ILLNESS

Family Caregivers’ Self-Efficacy for Cancer Pain and Symptom Management at Home

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Background: By the year 2040, the global burden of cancer will be approximately 28.4 million cases, and the majority will be in developing countries. The escalating cancer burden has led to a high demand for cancer care services worldwide and to the shifting of a significant part of cancer care from the hospital setting to the outpatient and home setting. At home, the family caregivers assume the caregiver role mostly without prior preparation to meet the changing patient needs but they still contribute significantly to the patient outcomes such as cancer pain and symptom management. Moreover, the pain and other cancer symptoms intensify the care demands. Escalation in care needs and demands can negatively impact both the patient and caregiver. In countries such as Oman, little is known about the family caregivers’ abilities to manage cancer pain and related symptoms at home, or the specific interventions needed to support caregivers.

Objective: We aimed to explore the modifiable predictors of Omani family caregivers’ self-efficacy for cancer pain and related symptom management (SE) in adult cancer patients. The modifiable predictors revealed aspects that can be augmented through supportive nursing intervention.

Methods: Data was collected from 165 Omani family caregivers during follow-up care in the outpatient cancer unit of a national cancer center in Oman. The questionnaire comprised the caregiver cancer pain and related symptoms management self-efficacy scale, the Katz Index, Caregiver Reaction Assessment, and Family Pain Questionnaire. Electronic medical records provided data on patients’ cancer diagnosis, pain, and symptoms. Predictors of SE were examined using Linear regression analysis.

Results: Most caregivers were female (58.2%) and children of the patient (53.9%). Most patients were on chemotherapy or palliative care (82.4%) and had at least stage 3 cancer (58.8%). The participants reported average SE and the predictors of SE were: patients’ functional status (β= 40.90, p= .001), patients’ pain intensity (β= -15.10, p= .036), caregiver’s confidence in controlling the patients’ pain (β= 28.80, p= .000), caregivers’ self-rated health (β= -25.90, p= .038), and the interaction of caregivers’ knowledge level with patients’ pain intensity (β=-1.31, p= .008), caregiving hours (β= -0.10, p= .025), and the impact of caregiving on caregivers’ physical health (β=1.29, p= .031).

Conclusion: The family caregivers’ health status, knowledge, caregiving demands, patient functional status, and pain intensity significantly influence their ability to manage the cancer patient’s symptoms. Interventions targeting these aspects may help to improve pain and symptom management in cancer patients, and patient and caregiver well-being.

Implications for Practice: A model of cancer care that includes interventions to enhance family caregiver self-efficacy, health, and knowledge can positively impact cancer pain and other symptoms management in adult Omani cancer patients.

Funding: The study was funded by the Deanship of Research, Sultan Qaboos University (grant number IG/CON/AHCC/17/02).

CHRONIC ILLNESS

Depression Is a Predictor of Cachexia in Heart Failure Patients

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Background: Cardiac cachexia (CC) is associated with increased morbidity and mortality in heart failure (HF). Compared to the biological underpinning of CC, little is known about the psychological factors. The overarching objective of this study was to determine whether depression increased the risk of cachexia onset in HF patients.

Methods: 114 participants with a mean age of 56.70 ± 13.00 years, LVEF of 33.13 ± 12.30% and NYHA class II (48.50%) and III (31.00%) were assessed for depression using the PHQ-9. Body weight was measured at baseline and after six months. Patients who had > 6% non-edematous unintentional weight loss were classified as cachectic. Univariate and multivariate regression analyses were used to examine the relationship between CC and depression, controlling for clinical and demographic variables.

Results: Cachectic patients had significantly higher baseline BMI levels (31.35 ± 5.70 vs. 28.31 ± 4.73; p= .038) and depression scores (mean=7.17 ±6. 44 vs. 4.26 ± 3.98, p=.049), and lower LVEF (mean=24.50 ± 9.48 vs. 34.22 ± 12.18, p=.00) when compared to their non-cachectics. In the multivariate regression analysis, depression scores (OR = 1.25; CI = 1.01-1.54; p=.035) and LVEF levels (OR = .83; CI = 0.70-0.98; p=.03) predicted CC after controlling for age, gender, body mass index, VO2max, and NYHA class. When depression was dichotomized, these relationships remained significant for both depressive symptoms and LVEF.

Conclusion: Depression increases risk for CC, possibly through inflammation. Additional studies are needed to expand the knowledge of the role of the psychological determinants of this devastating syndrome.

The Gut Microbiome and Health Related Quality of Life in Older People

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Purpose: The purpose of this exploratory study was to determine if features of the gut microbiome associate with health-related quality of life measures in older people (ages 50-75 years).

Background: Chronic elevated levels of inflammatory biomarkers in the blood are considered risk factors for the development of age-associated comorbidities including cardiovascular disease, metabolic disorders, dementia and sarcopenia; conditions that can negatively impact a person's quality of life. In older people, changes in the composition of the gut microbiota have been associated with inflammation and age-related comorbidities. A recent population-wide, large scale study of healthy European volunteers (mean age 50.9 years) noted associations between fecal microbiome and measures of health-related quality of life. However, despite the reported changes in the gut microbiome of older people, and the higher prevalance of co-morbidities likely to impact health-related quality of life, studies investigating potential associations between the gut microbiome and health-related quality of life have not been undertaken. In this study, we will leverage previously acquired fecal microbiome datasets and health-related quality of life measurements, collected as part of a larger completed clinical study, to evaluate relationships between microbiota and health-related quality of life in a cohort of older people. We will probe if these relationships differ in older people with HIV, a disease that is also associated with changes in the gut microbiome, chronic inflammation and greater risk of comorbidities, to determine if the combined effect of HIV and aging impacts these relationships.

Methods: Fecal bacterial profiles of 22 study participants (21 male, 1 female) without HIV aged 50-75 years old, were generated using broad-range amplification and sequencing of 16S rRNA genes, and measurements of short chain fatty acid levels using gas chromatography. Exclusion criteria included active diarrhea, antibiotic use within two weeks, active hepatitis C, diabetes with insulin use, BMI <20 or >40 and chronic steroid use. Study participants also completed the 36-Item Short Form Health Survey, a tested method for measuring physical and mental quality of life. The questionnaire consists of eight sub scales that are weighted and combined to create overall physical health and mental health scores. Microbiome profiling and survey measurements were completed in a subset of people with HIV (N=8; all male, aged 50-75 years) from the larger study, who were on anti-retroviral therapy (>2yrs) and virally suppressed (HIV-1 RNA <200 copies/mL plasma; blood CD4 count >200 cells/µL). Separate linear regression models will be fit on the health-related quality of life measurements with HIV status and bacteria abundance as the predictors.

Results: Final analysis and results will be completed by March, 2022. Based on previous studies, we hypothesize that a higher abundance of fecal bacteria with the ability to induce inflammation, and lower levels of anti-inflammatory short chain fatty acids, will associate with lower health-related quality of life scores. The bacteria associations will differ by HIV serostatus.

Implications: Identifying associations between the microbiome composition and health-related quality of life may identify novel microbiome-based therapies to improve the overall well-being of older people.

CHRONIC ILLNESS

Exploring the Lived Experience of Persons Clostridioides Difficile with Photography

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Background: *Clostridioides difficile* is the most common healthcare-acquired infection in the United States. While there is a plethora of information on the treatment and diagnosis of *C. difficile* infection (CDI) in the literature, there is a paucity of data describing the lived experience of a person with the disease.

Study Population: The study population will consist of adults aged 18 and greater, recruited from a gastroenterology practice in Northern California, and from a clinic in Southern California.

Study Purpose/Lines of Inquiry: This study will explore the lived experience of a person who has had a *C. difficile* infection. Lines of inquiry include:

1. To describe the lived experience of having a CDI infection
2. To determine if photo-elicitation as a research modality will enhance the participant's ability to better describe the feelings of what it was like to have a *difficile* infection.

Methods: Using an interpretive, hermeneutic approach described by van Manen, this study will explore the lived experience of a person who has had a *C. difficile* infection. Each study participant will 1) participate in a 1:1 semi-structured interview and 2) take up to six photographs that they believe are symbolic or representative of their *C. difficile* infection. Participants will take photographs with their smartphones (or will be given a digital camera) and will send them to the primary investigator. The researcher and study participant will review the photographs together in a second interview and discuss how the photographs relate to the lived experience of having a CDI.

Data Analysis Plan: All interviews will be recorded and professionally transcribed. Using a selective highlighting approach, the transcripts will review, and themes will be identified. Key sentences or sentence clusters will be aligned with each theme. Through a process of thematic analysis, the essence of the phenomena will be discovered.

Results: Pending.

Implications: Knowing the lived experience of the person who has had a CDI will illuminate the experience and will provide nurses with a clearer understanding of what having a *C. difficile* infection means to the patient.

Keywords: Clostridioides difficile, phenomenology, lived experience, photo-elicitation, quality of life

CHRONIC ILLNESS

The Association between Gut Microbiome, Gut Metabolites and Metabolic Syndrome Traits

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Background: Metabolic syndrome is a cluster of risk factors including central obesity, dyslipidemia, hypertension, and insulin resistance, and is associated with increased risk for cardiovascular disease and type 2 diabetes. Previous research has suggested that the microbiome and gut-derived metabolites influence metabolic syndrome traits. The purposes of this study was to: 1) identify gut microbiome and gut metabolites that are associated with metabolic syndrome traits; and 2) determine if metabolites of the gut microbiota predict major adverse cardiovascular events and diabetes.

Methods: This study was a secondary analysis of data from the Metabolic Syndrome in Men (*METSIM*) study, which includes a cohort of men randomly selected from the population of Eastern Finland. METSIM is a large well-characterized cohort with a detailed phenotyping and long follow-up period. We analyzed a subset of 915 subjects who participated in 7-years of follow-up for which stool samples and metabolomic data were available. These subjects had stool samples on 2 or 3 timepoints over a time period of 4 years. Metabolites were quantitated using stable isotope dilution liquid chromatography with tandem mass spectrometry. Metabolite levels were linked to metabolic syndrome traits using lasso and stepwise regression. The analyses were adjusted for age, diet, BMI, exercise, history of diabetes, coronary heart disease, smoking, alcohol, and medication. We have 16S RNA sequencing of stool samples data available and metagenomic sequencing of stool samples is underway.

Findings: Mean age was 54.94 ± 5.04 years and mean BMI was 27.31 ± 3.44 kg/m^2. we identified 10 gut derived metabolites that are associated with metabolic syndrome traits. Xanthurenate (β = 0.083, p-value = 0.001), phenyl lactate (β =0.225, p-value=0.0) and ursodeoxycholate (β =0.023, p-value=0.022) were significantly associated with insulin resistance, and indole propionate (β =-0.048, p-value= 0.006) was inversely associated with insulin resistance. Xanthurenate (β =0.074, p-value=0.003) and spermidine (β =0.041, p-value=0.002) were significantly associated with hyperglycemia, and Taurolithocholate 3-sulfate (β = -0.041, p-value=0.001) was significantly associated with lower blood sugar. Xanthurenate was also significantly associated with obesity and higher diastolic blood pressure respectively (β=0.966, p-value= 0.00, β =1.098, p-value=0.025). Xanthurenate (β =0.122, p-value=0.023) and indole lactate (β =0.367, p-value=0.001) were significantly associated with hyperlipidemia. Glycolithocholate sulfate (β=-0.090, p-value=0.002), indole propionate (β =-0.072, p-value=0.007), and imidazole propionate (β =-0.091, p-value=0.011) were significantly associated with lower LDL. Taurolithocholate 3-sulfate (β =-0.038, p-value=0.002), and trimethylamine N oxide (β =-0.087, p-value=0.004) were significantly associated with lower triglyceride.

Conclusions: Microbial metabolites might be important predictive biomarkers for the risk of cardiovascular disease and type 2 diabetes. Understanding of host-microbiome inter-relationships may result in novel approaches for prevention, diagnosis, and treatment of cardiometabolic disorders. These findings support further study in women and minority groups in order to advance knowledge of the microbiome and improve health equity.

Keyword: Microbiome, Metabolites, Metabolic syndrome

Age Differences in Core Symptoms and Symptom Relationships in IBS: A Network Analysis

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Background and Purpose: Irritable bowel syndrome (IBS) is a common disorder of gut-brain interaction, characterized by chronic, recurrent abdominal pain/discomfort related to defecation or a change in bowel habits (constipation and/or diarrhea). A significant subgroup of individuals with IBS also experience a variety of co-morbid symptoms, some of which are considered gastrointestinal symptoms (e.g., nausea, bloating) but also other extra-intestinal somatic (e.g., fatigue, sleep disturbances) and psychological (e.g., anxiety, depression) symptoms. Although the overlap between IBS symptoms, other gastrointestinal, extra-intestinal somatic and psychological symptoms in persons with IBS is acknowledged, the nature of inter-relationships among the full range of symptoms in IBS is not well understood. In addition, although prior studies have noted age differences in IBS prevalence and specific symptom severity, whether and how specific symptoms and symptom relationships in IBS would vary by age remains unclear. The purpose of the study was (1) to investigate the relationships among 28 IBS and non-IBS symptoms and identify core symptoms driving the symptom structures, and (2) to compare core symptoms and symptom relationships between young (aged ≤ 45 years) and older (aged > 45 years) adults with IBS.

Methods: Daily symptom data on 28 common symptoms in IBS, including IBS symptoms, other gastrointestinal symptoms, extra-intestinal somatic and psychological symptoms were collected in 363 adults with IBS (mean age 41.0 years, 86.5% female) for 28 days. Network Analysis was used to examine and visualize relationships among 28 symptoms between young (n =216, mean age 30.4 years, 84.7% female) and older (n = 147, mean age 56.5 years, 89.1% female) adults. Core symptoms were identified based on the strength centrality indices through network analysis. Further, the network comparison test was used to compare the three network properties between young and older adults: network structure, edge (connection) strength, and global strength.

Results: In both young and older adults with IBS, fatigue emerged as the most important symptom among the 28 symptoms based on the estimated strength centrality indices. However, for young adults with IBS, not only fatigue but also anxiety exhibited greater influence than other symptoms in the network structure. In addition, our network analysis suggests the overall symptom structure and the connectivity of symptoms remain constant in adults with IBS, regardless of age.

Conclusions and Implications: The network analysis findings suggest fatigue is a critical target for symptom management in adults with IBS, regardless of age. In addition to fatigue management, treating comorbid anxiety is also important for young adults with IBS. Our findings add to current knowledge in IBS symptom management by identifying age differences in core symptoms, and sheds new light on age-specific symptom interventions for IBS populations. Additional replication in a larger sample with more men with IBS is warranted to verify our results.

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Types of CAM Used in a Multiracial Diabetic Peripheral Neuropathy Population

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Purposes/Aims: The purpose of this research study is to identify types of complementary and alternative medicine (CAM) used in a multiracial adult population with diabetic peripheral neuropathy (DPN).

Rationale/Conceptual Basis/Background: Diabetes is the seventh leading cause of death nationwide and a common cause of peripheral neuropathy. There are a variety of symptoms including tingling, pain or numbness in hands and feet contributing to limited mobility and discomfort. People with DPN may experience decrease in quality of life, significant morbidity, and increased health costs. Types of CAM such as medicines, therapies, and practitioners for diabetic peripheral neuropathy could be an acceptable form of symptom management.

Methods: A quantitative cross-sectional feasibility study was conducted on a convenience sample of patients with DPN in a primary clinic in Hawai‘i. A total of one hundred twenty-eight patients were approached to participate and seventy-one patients completed the consent form and surveys in Hawai‘i. The questionnaire used in the study was adapted from the H.A. Chang diabetes CAM survey from a prior study on patients with diabetes and CAM use. The survey questions explored patient’s experience with diabetes and types of CAM. For this study patients were asked “Have you ever used the following types of CAM medicines and therapies such as nutritional supplements, diet modification, and herbal medicine? When did you use these types of CAM therapies? Why did you use these types of CAM?” Descriptive statistics was used to analyze CAM survey data.

Assessment of Findings/Outcomes Achieved: The 71 respondents who completed the survey were between the ages of 34 to 85 years and 48% female and 52% male. The racial/ethnic representation included 21 Native Hawaiians (30%), 35 Pacific Islanders (49%), 6 Asians (8%), and 9 other races (13%). The highest level of education was high school for (76%) of the patients and 45% of the respondents reported not working. The total household monthly income was under $1,200 for 69% of the respondents. A few examples of the types of CAM selected among respondents were nutritional supplements, diet modification, herbal medicine, cupping, scraping, manipulative based therapy, biofield therapy, and super natural healing. Respondents with DPN in this study believed in utilizing CAM as a treatment modality for diabetes. Also, health care providers and surrounding social support systems recommended CAM use.

Conclusion: CAM was utilized to complement conventional therapies. Health care providers may consider assessment and recommendation of CAM use in clinical practice. For future nursing research, explore spiritual and culture influence on CAM types. Also, nursing practice to include an assessment of CAM types may lead to improved quality patient care.

Chronic Kidney Disease (CKD) Incident, SDOH, & SVI in Hawaii

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Purpose/Aim: The study will examine the association of social determinants of health (SDoH), social vulnerability index (SVI), and CKD incident among Hawaii (HI) residents.

Aim1: Determine CKD incident using CKD biomarkers of Hawaii residents.

Aim 2: Identify SDoH and SVI based on zip code linked to CKD incident of Hawaii residents.

Rationale/Conceptual Basis/Background: Native Hawaiian/Pacific Islander (NHPI) & Asian American (AsA) populations are the fastest growing racial/ethnic groups; 22.8 million AsA and 1.6 million NHPIs reside in the US. For an island state with a large number of CKD NHPIs & AsAs patients, Hawaii spends $264 million annually. Hawaii’s kidney failure rate is 30% higher than the national level. In the US, the prevalence of end-state-renal disease (ESRD) is 9.5 times greater in Native Hawaiians (NH)s and Pacific Islander (PI)s and 1.3 times greater for AsAs. While incidence & prevalence and risk factors of ESRD studies exist on NHPIs and AsAs, there is a paucity of CKD studies on AsAs and no studies on NHPIs. Limited Hawaii cross-sectional studies on NHPI & AsA population findings indicate an increased risk of CKD prevalence & risk factors among these groups were independently associated with higher risk of markers of kidney damage.

Methods: This is a retrospective analysis of a prospective cohort study from Hawaii using a single laboratory source to address Aims 1 and 2. The study will include adult patients over an initial 3-year period from January 2016 – December 2019 of outpatient laboratory data. CKD biomarkers include estimated glomerular filtration rate (eGFR) and albumin creatinine ratio (ACR). The American Community Survey use of zip code will be utilized to determine average age, sex, and race/ethnicity and CDC use of zip code to determine SVI.

Assessment of Findings/Outcomes Achieved: This research has been recently approved by the University of Hawaii at Manoa (UHM) Office of Research Compliance (2021-00472-12/11/21), UHM Data Governance Board (DGP#220209-4 2/14/22), and John A. Burns School of Medicine – University Health Partners Privacy Board 4/29/22), and UHM General Counsel – Data Use Agreement Approved (10/5/2022). The research is in progress and estimated date of completion is Spring 2023.

Conclusions/Implications: This study is innovative in using a large laboratory data set to determine SDoH, SVI, and CKD incident. Secondly, using zip code as a proxy to SVI and average age, sex, and race/ethnicity is a novel approach to examining CKD incident.

Racial Differences in Dietary Patterns of Obese Patients with Heart Failure

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Background: There is growing recognition that nutrition may play a crucial role in the management of patients with heart failure. However, our knowledge regarding racial differences in dietary patterns, body weight and composition, and nutritional status of overweight and obese patients with heart failure is limited.

Methods: We examined the nutritional patterns (e.g. average kilocalories, macronutrient breakdown), adiposity (e.g. body weight, body composition), and nutritional status (e.g. albumin levels, lipid profiles) of 43 obese patients with chronic heart failure (mean age 56 ± 10; male [72%], Asians [n = 4], Hispanics [n = 10], Blacks [n = 7], and Whites [n = 22]) participating in a clinical trial designed to compare the effects of a high protein vs. standard protein diet on adiposity and other health characteristics. Food intake at baseline was tracked using a 3-day food record; relationships between food intake, adiposity, and nutritional status at baseline were compared across the 4 racial groups.

Results: Asians reported consuming more calories ($p = 0.005$), carbohydrates ($p = 0.006$), protein ($p = 0.001$), and fat ($p = 0.020$) at baseline. Whites reported lower protein intake than their counterparts; a breakdown in types of protein (e.g. vegetable, animal) showed that animal protein intake was lower for Whites ($p = 0.030$). Baseline HDL cholesterol was lower for Hispanics than for non-Hispanics at 3 months ($p = 0.003$); all other clinical outcomes (body weight, adiposity, albumin level, and lipid profile values) other than HDL cholesterol were comparable across the 4 racial groups.

Conclusion: Our findings are limited by the observational nature of the study and our inability to conduct inferential statistics due to the small sample size. Nevertheless, data to support the racial differences in dietary intake and weight loss patterns in this population are novel and may explain some of the differences in morbidity and mortality reported in overweight and obese patients with chronic heart failure. Future studies with a larger sample size are warranted to explicate the role of race and food consumption, with an emphasis on the role of manipulations in macronutrient composition of diets on overall weight loss, adiposity, and risks for worse clinical outcomes.

Using the UCSF Symptom Management Theory to Improve Dyspnea in Patients with IPF

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Purpose: Dyspnea is experienced by 90% of patients with idiopathic pulmonary fibrosis (IPF). Dyspnea among IPF patients is associated with reduced quality of life and higher rates of mortality than most cancers. Established breathing management techniques have been shown to reduce dyspnea in patients with chronic obstructive pulmonary disease (COPD), and hold promise for those with IPF. The University of California San Francisco (UCSF) Symptom Management Theory provides a guiding framework to inform intervention development and testing of breathing management techniques among IPF patients with dyspnea.

Description of Theory: The UCSF Symptom Management Theory is a middle-range theory developed to guide symptom assessment and treatment in nursing practice. Originating in 1994 and revised in 2001, the current theory is comprised of three central concepts: symptom experience, symptom management strategy, and symptom outcome. The symptom experience is an individual's perception, evaluation, and response to the meaning of the symptom. The symptom management strategy is defined as efforts to prevent, delay, or minimize the symptom experience. The symptom outcome is the key outcome of interest in the UCSF Symptom Management Theory and is defined by measurable outcomes to assess pre- and post-implementation of an intervention strategy. These concepts are inherently interlaced as evidenced by the bidirectional arrows between the concepts to represent a simultaneous interaction among the three central concepts.

Logic Linking the Theory to Research: The UCSF Symptom Management Theory is a suitable theoretical framework to guide the investigation into the effect of breathing management techniques on dyspnea in patients with IPF given its central concepts and emphasis on symptom status change. The central concept of interest in the proposed research is dyspnea, defined as shortness of breath. In this application, the individual's interpretation of the frequency, intensity, distress, and meaning of shortness of breath encompasses the symptom experience. Such interpretations may encompass anxiety, stress, and quality of life. The symptom management strategy encompasses implementation of breathing management techniques such as pursed-lip and diaphragmatic breathing. Measurable symptom outcomes would be a reduction in the score of dyspnea severity as measured by a shortness of breath questionnaire. The symptom outcome allows the pre-post evaluation of the effect of breathing management techniques (symptom management strategy) on the symptom experience. We hypothesize that the implementation of breathing management techniques will result in a reduction of the symptom outcome, dyspnea severity, and improve quality of life in patients with IPF.

Conclusion: The UCSF Symptom Management Theory is an appropriate framework to guide a proposed quasi-experimental intervention study to reduce dyspnea severity and improve quality of life among patients with IPF. While the literature supports the implementation of breathing management techniques to reduce dyspnea severity in patients with COPD, little is known regarding the application of this symptom management strategy in patients with IPF. Thus, the UCSF Symptom Management Theory is an ideal framework to assess the symptom experience, symptom management strategy, and symptom outcomes among IPF patients with dyspnea.

CHRONIC ILLNESS

Existential Advocacy in Nursing: A Concept Analysis

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Background: Today's constantly innovating and fast-paced healthcare environments make patient communication of healthcare goals and values more important than ever. As modern nursing advances at an astounding rate, concepts like existential advocacy are vital for delivering patient care in line with their wellness goals and personal values. In addition, existential advocacy is crucial for supporting patients' self-determination within their personalized health and wellness trajectory. However, the concept lacks a comprehensive definition relevant to modern nursing that distinguishes it from other forms of nurse advocacy.

Aim: This concept analysis aims to explore, clarify, and modernize existential advocacy within the Discipline of Nursing. The goal of educating nurses on existential advocacy is to expand nurse advocacy in practice settings beyond something done *for* their patients to advocacy done *with* their patients.

Definition: Existential advocacy is nurses' efforts to support and promote their patients' right to self-determination by helping them discern their holistic health and wellness situation and then clarify their values within that reality. Subsequently, existential advocacy aims to help patients reach wellness decisions congruent with their authentic health reality, as opposed to an idealized, paternalized, or strictly medical interpretation.

Method: Utilizing Walker and Avant's method for concept analysis, a standardized structure to identify existential advocacy's defining attributes, antecedents, consequences, and empirical referents emerged. Comprehensive literature searches identified relevant publications from the following databases: PubMed, PsycINFO, and CINAHL. The Preferred Reporting Items for Reviews and Meta-Analysis guidelines were utilized for the article selection process.

Results: Antecedents were: patient vulnerability, nurse-patient rapport, nurse autonomy to act as an advocate, and patient request for advocacy. Defining attributes included: supporting patient self-determination, caring-trusting nurse-patient relationship, promoting individualized meaning of health and wellness, and encouraging value-based problem-solving. The optimal consequence of existential advocacy is assisting patients with self-awareness regarding their current health status leading to individualized care and decision-making based on their values.

Conclusion: Existential advocacy condenses the care and advocacy many nurses already provide into a defined nursing concept while highlighting nurses' essential role in patients' physical, emotional, and spiritual care. With existential advocacy better defined, the concept can be readily taught, assessed, and implemented within the Discipline of Nursing.

A Retrospective Evaluation of the Effectiveness of a Meal Delivery Program on Adults

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Problem Statement: Depression, food insecurity, and malnutrition are common in seniors (adults aged 65 and older) admitted to the acute care setting. Access to adequate and quality nutrition in community dwelling adults is critical to quality of life and in helping adults age in place. Home meal delivery program coordination, post-acute care discharge has been associated with decreased depression, greater food security, and increased Body Mass Index (BMI).

Statement of Purpose: This project will evaluate the effectiveness of a meal delivery program using a self-administered survey on depression, food insecurity, and BMI, of adult patients prior to their participation in a meal delivery program and after one month of receiving meals in the program. This project will assess participant satisfaction with the meal delivery program after one month. This project will assess the relationship between level of depression and level of food insecurity for patients before participating in a meal delivery program.

Project Questions: Q1: Is there a significant difference in depression for patients before they participate in a meal delivery program and after one month? Q2: Is there a significant difference in food security for patients before they participate in a meal delivery program and after one month? Q3: Is there a significant difference in BMI for patients before they participate in a meal delivery program and after one month? Q4: What is the level of satisfaction for patients after participating in the meal delivery program after one month? Q5: Is there a significant relationship between level of depression and level of food insecurity for patients before participating in the meal delivery program?

Method: This is a two-site study, convenience sample, with a retrospective evaluation using a pre-posttest, within-group design, with data collection before and after one month of home meal delivery program. English speaking, aged 60 and older, enrolled in a post-acute care home meal delivery program will be asked to perform three self-assessment surveys at baseline, and again after one month of participation in the program. The post-survey data will be conducted by telephone by the project coordinator. Depression will be assessed through the Personal Health Depression Scale (PHS-8), food security though the U.S. Adult Food Security Survey Module: Six-Item Short Form, and BMI through the Mini Nutritional Assessment Short Form (MNA-SF). Satisfaction with the meal delivery program will be assessed after one month using the Allegheny County Department of Human Services Survey.

Significance of the Project: It is expected that those receiving the intervention will have a decrease in depression, food insecurity, increase in BMI, and will be satisfied with the meal delivery program. The findings from this study may help the organization sustain what it is currently doing for the community and may justify allocation of more resources and funding for meal delivery programs. This project will enhance our knowledge on the relevance and effectiveness of community food and nutrition programs.

Improving Advanced Care Planning through Spanish Group Classes for Older Latino Adults

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Background: Advanced Care Planning (ACP) involves learning about decisions that a person may need to make at the end of life. These goals reflect the individual's personal values and wishes and are ultimately communicated to the family and health care provider. The Latino community in the United States faces a disparity in learning about advanced care planning that stems from factors, including literacy, health status, and language barriers. Cultural values and spirituality needs also present unique challenges to this population. Roughly one in ten Latinos in the United States have documented ACP goals. This lack of advanced care planning makes Latinos more likely to receive aggressive and potentially unwanted end-of-life treatment, have more in-hospital deaths, and have less hospice utilization. In addition, barriers in the outpatient primary care setting, such as insufficient time and a lack of formal system for assessing patients' end-of-life wishes, further impede advanced care planning conversations.

Purposes: This project aims to address the disparity by creating a culturally sensitive and linguistically appropriate group class that not only creates a space where older Latino patients and their family members can discuss and reflect on goals for end-of-life care but also provides a platform to educate the Latino community about ACP.

Methods: This project will provide ACP group classes to Latino patients >65 years old at a large academic medical facility geriatrics clinic. Participants will attend a 60-minute group class led by a DNP-Family Nurse Practitioner (FNP) student, a linguistically and culturally competent critical care RN who has experienced ample end-of-life situations in the inpatient setting. Topics discussed during the group class will include: the definition of advance care planning, the significance of ACP in situations where patients are incapacitated, goals and values in advancing age, recognition of cultural norms that may be involved when making goals of care decisions, and introduction to advance directive forms. A pre- and post-survey will be administrated to assess readiness to engage and knowledge of ACP topics. A post-class survey will also be conducted to evaluate the satisfaction with the ACP group classes and seek for additional challenges that older Latino adults might have on end-of-life planning. A post-class individual consultation will be offered. The individual consultation will help identify a surrogate-decision maker and complete goals of ACP conversations will be assessed. Descriptive statistics will be used to summarize demographic information and outcomes of the project. Patient feedback will be utilized to identify major challenges and unmet needs.

Results: Pending. Results will be presented at the conference.

Conclusions: The impact of this project will reinforce the need for and importance of culturally sensitive and linguistically appropriate approaches to ACP in older Latino patients. Early and continuous education and conversation about advanced care planning will improve the quality of end-of-life in older Latino patients.

Associated Factors of Preventive Health Behavior in Relation to COVID-19

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Background: The pandemic coronavirus has been a great challenge to global public health for the last two years with no exception of any countries. Korea Disease Control and Prevention Agency (KDCA) reported 20,052,305 cases and 25,110 deaths as of August 3, 2022. To remain safe during this public health crisis, individuals must take preventive measures. However, Korean young adults seem less compliant with preventive health behaviors than older adults.
Purpose: This cross-sectional study aimed to explore the relationship between risk perception variables (optimistic bias, hypochondriasis, and mass psychology) and preventive health behavior to the pandemic coronavirus through a cross-sectional online survey.
Methods: Participants of the study were 91 Korean college (undergraduate and graduate level) students age of 19-30. They were recruited and completed the survey via the university online site from May 31 to June 6, 2022. Data were analyzed using the IBM SPSS software. Descriptive statistics were used to analyze the general characteristics of the study participants. Normality was tested using Kolmogorov-Smirnov and Shapiro-Wilk. The differences in optimistic bias, hypochondriasis, mass psychology, and preventive health behavior based on participants' characteristics (gender, age, experience of COVID-19, experience of illness, history of hospitalization, and present illness) were analyzed using Mann-Whitney, a non-parametric test for non-normal distribution of variables (optimistic bias, hypochondriasis, mass psychology, and preventive health behavior). The differences in preventive health behavior among the three groups (lower than 25%, 25–75%, and higher than 75%) based on the level of optimistic bias, hypochondriasis, and mass psychology were analyzed using the Kruskal-Wallis test, a non-parametric test. The correlation between optimistic bias, hypochondriasis, mass psychology, and preventive health behavior was analyzed using Spearman's rho, a non-parametric test.
Conclusions: The results showed that mass psychology had the positive relationship with preventive health behavior, whereas optimistic bias and hypochondriasis did not. In detail, people with high or middle level in mass psychology had higher preventive health behavior compared with those who were in low level of mass psychology and the highest compliance showed on wearing a mask followed by the COVID-19 vaccination whereas the lowest compliance was on the influenza vaccination. These findings could be explained by the very Korean culture of strong collectivism and the characteristic of COVID-19 which evoked extreme fear globally. Due to non-normal distribution of variables, the study was not able to identify causal relationship between mass psychology and preventive health behaviors. However, the study results would be useful in establishing policies for the ongoing prevention of COVID-19. In addition, it suggested mass psychology should be used well in planning preventive communication campaigns.
Keywords: optimistic bias; hypochondriasis; mass psychology; preventive behavior; COVID-19; influenza

Funding: This study was funded by the research grant of Kangwon National University. No grant number assigned.

Healthcare Experiences of RV-Dwelling Full-Time American Nomads

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Purposes: The purpose of this qualitative study is to explore the experiences of RV-dwelling full-time American nomads when they seek healthcare in the United States. Barriers and facilitators to healthcare access will be identified.

Background: It has been estimated that there may be a million or more Americans living while traveling full-time in recreational vehicles. Full-time nomads include individuals from all age groups and families with children. Increases in the numbers of RV-dwelling full-time nomads have been attributed to increased opportunities for remote work and school, the shortage of affordable housing, and shifting cultural values. Social scientists have described RV-dwellers as a neo-tribe with a unique culture.

Conceptual Basis: Levesque's conceptual framework of access to care organized the factors that impact healthcare access through each stage of the care experience to provide a comprehensive view of healthcare access. In this study, Levesque's framework will be used to support the analysis of data and to organize the findings.

Rationale: Many RV-dwellers practice lifestyle mobility, a pattern of mobility characterized by feeling at home while making recurrent moves of varying durations. Health policies in the U.S. may present barriers to healthcare access for people who are geographically mobile. Frequent geographic moves may lead to fragmentation of care. RV-dwellers may camp in locations that are remote from healthcare and other municipal services. Despite the numbers of RV-dwelling full-time nomads in America and the potential impacts on healthcare, little research has explored the healthcare experiences of this population.

Methods: This exploratory study has received IRB approval. The investigator is traveling to campgrounds in multiple states to meet RV-dwelling nomads and recruit volunteers for semi structured interviews. At the time of abstract submission five interviews have been completed with seven participants. It is anticipated that fifteen to thirty participants will be needed to answer the research questions. After answering some demographic questions to provide context, participants are asked to describe their experiences when seeking healthcare. Barriers and facilitators to healthcare access are discussed. If additional participants are needed, social media recruitment will be added. Data collection will be complete in February, 2023. Data analysis will be concurrent. A phronetic iterative approach to thematic analysis will be employed to identify themes from the interview transcripts through multiple rounds of inductive and deductive coding.

Expected Outcomes: The outcome of the analysis will include descriptions of the experiences of RV-dwelling full-time American nomads when seeking healthcare. Barriers and facilitators to healthcare access will be identified and Levesque's conceptual model of access to care will be adapted to display the factors that impact health care access for this population.

Implications: The knowledge generated in this study could help prepare nurses to meet the needs of nomads by increasing their understanding of the lifestyle and its impact on healthcare access. The findings could prepare nurses to advocate for nomadic populations in health policy decisions. In addition, the knowledge generated will support future research by identifying foci for further inquiry that are meaningful in this population.

COVID-19 Impact and Disparities by Immigration Status Among California Adults

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Purpose: This study aimed to characterize disparities in the health and social impact of COVID-19 among California adults by citizenship status.

Background: COVID-19 pandemic and the US public health mitigation strategies had an overwhelming toll on marginalized race/ethnic minority communities, including sub-groups of immigrant populations. Non-citizens represent a vulnerable sub-population of immigrants which includes refugees, asylum seekers, temporary visa holders or undocumented migrants. There is a need to examine disparities beyond race and ethnicity or foreign-born status to inform research, program, and policy development in promoting health equity.

Methods: This study analyzed secondary data from the California Health Interview Survey (CHIS) 2021, with an overall sample size of 24,453 immigrant and non-immigrant adults 18 years and older. We performed descriptive statistics and bivariate analysis using chi-square test of independence to examine the relation between citizenship status (US-born citizen, naturalized citizen, and non-citizen) and various COVID-19 related outcomes (including ever had or thought had COVID-19, vaccine uptake, risk reduction behaviors, job loss, childcare difficulties, and difficulty paying for rent and basic necessities during the pandemic).

Results: Among the total sample, approximately 68.1% were US-born, 18.8% were naturalized citizens, and 13.1% were non-citizens. Non-citizen immigrants were primarily from Mexico (48.4%), Asia and Pacific Islands (28.6%), Central America (11.7%), Other Latin America (3.1%), Europe (5.2%) and Other (3%). The total sample includes Hispanic (37.7%), Non-Hispanic White (NHW) (40.2%), African American/Black (5.5%), Asian (13.8%), and all other (2.9%) adults. Around 49% were female, 36% had high school or less level of education, 92% had health insurance, 38% were unemployed, and about 29.8% live less than 200% Federal Poverty Level. In 2021, approximately 20.6% of the analytic sample reported they ever had or thought had COVID-19, and 60.6% had contacted a health professional about COVID-19. While non-citizens had the highest rates of ever had or thought had COVID-19 (24.7%) and higher risk reduction behaviors (82.6%) when compared to US-born citizens, non-citizens had the lowest rates of testing (59.9%) compared to US-born citizens, lowest rates for having received at least one dose of the COVID-19 vaccine (49.6%), had the highest rates for perceived discrimination due to race/ethnicity (4.8% vs 2.4%), had the highest rates for having lost a job during the pandemic (17.9% vs 10.4%), childcare difficulties (4% vs 3%), difficulty paying for rent (15.17% vs 7.4%) and difficulty paying for basic necessities (19.8% vs 10.3%). Bivariate analysis showed statistically significant differences between immigrant groups compared to US-born citizens ($p<.005$).

Implications for Further Research: The results reflect disparities in access to healthcare and social services particularly among non-citizens and show the importance of examining citizenship status as a critical immigration-related factor in the disproportionate toll on marginalized populations amid the COVID-19 pandemic. This study informs safety net policy development for health and social services for all, regardless of citizenship status.

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Syringe Service Clients' Input in the Design of a Nurse-Led MOUD Program

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Background: The opioid epidemic disproportionately affects the unhoused population with an overdose-related death rate 20 times higher than that of the general population. Medications for opioid use disorder (MOUD) are an efficacious treatment modality, yet the majority of unhoused individuals with opioid use disorder (OUD) do not receive this treatment. This is in-part related to the population's previous experiences of stigmatized care and hesitancy to engage in services and also related to lack of access. In Montana, only two MOUD prescribers specifically serve Montana's unhoused population. Two low barrier MOUD approaches have been shown to increase access among vulnerable populations – offering MOUD at syringe service programs (SSP) and using a nurse-led model of care. Combining these approaches serves to utilize trusted sources of care while increasing access.

Purpose: Prior to implementing a nurse-led MOUD program in Montana's longest serving SSP, we are using a community-based participatory approach to gauge our clients' interest in these services and to assess feasibility of the program. We aim to understand their prior healthcare experiences, opioid use, risk factors for overdose, interest in MOUD, and program features that would meet their needs and preferences.

Methods: To gain insights from our clients, we are recruiting 60 SSP clients who endorse the misuse of opioids for an interviewer-administered, 30-minute survey. The survey includes both closed and open-ended questions about current and prior healthcare experiences, substance use patterns, overdose occurrences, and knowledge of, experience with, and interest in MOUD. Additionally, we are requesting clients' feedback on our proposed program model and asking about foreseeable facilitators or barriers that would impact their use of the program. Analysis will include descriptive statistics for close ended questions and thematic analysis for open ended questions.

Implications: The majority of our SSP clients experience houselessness and, therefore, experience many barriers to receiving MOUD. As a result of stigmatized encounters, the unhoused population and those with opioid use disorder often have a mistrust of the healthcare system. SSPs serve as a safe, non-judgmental space to receive care. Clients utilizing services at the SSP demonstrate their trust of staff through regularly engaging in services. Expanding those services to include MOUD, delivered by trusted SSP staff, will help connect this marginalized population to treatment. To ensure our MOUD program honors the trust gained by our clients, we want to build on our population's knowledge and experience, using their insights and wisdom to support the design of our program.

Funding: Montana Healthcare Foundation, Montana State University Outreach & Engagement

COMMUNITY & PUBLIC HEALTH

Did the State COVID-19 Vaccine Laws Change Population Health Outcomes?

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Purpose/Aims: The purpose of this research is to understand the impact of state-level legislation and executive orders in the United States regarding COVID-19 vaccinations on specific population health outcomes: COVID-19 case rates per 100,000, COVID-19 hospitalization rates, COVID-19 vaccination rates before and after the enactment of the legislation and COVID-19 death rates. The pandemic responses of different U.S. states included a variety of laws, some of which were intended to increase vaccination rates, and others which were intended to protect the liberty of citizens by codifying protections from vaccine requirements implemented by employers or local governments.

Rationale/Conceptual Basis/Background: The comparison of state-level pandemic outcomes is ongoing, but there is clear evidence that some states are faring better than others. We are still learning which pandemic interventions were effective. No research has been published yet on the impact of various COVID-19 laws. This research will examine the contribution of policy on those outcomes. One state banned vaccine mandates (MT), while 14 ensured that vaccine mandates implemented by private employers had exemptions (AZ, UT, ND, NE, KS, TX, AR, MS, AL, TN, IN, WV, SC, FL). Fifteen states banned mandates for state employees (AZ, MT, TX, ND, AR, MO, MS, TN, IN, MI, NH, VA, GA, SC, FL), while another 13 mandated the vaccine for state employees (WA, CA, CO, NM, IL, WI, VT, MA, CT, MD). Nearly half the states (n=24) banned proof of vaccine for those seeking services in the private sector or engaging in commerce. Other states deployed digital vaccination verification via an app (CA, NV, OR, WA, MN, LA, VA, NY, MA, CT, RI, NJ, HI).

The theoretical framework for this research is the Political Determinants of Health model (Dawes, 2020), which outlines the three interconnecting political determinates of voting, government and policy, and how they operate simultaneously, in ways that mutually reinforce one another and concurrently impact or are impacted by the continuum of interacting barriers and interventions, such as commercial interests and security. Dawes (2020) explains that “this is a continual strategic process that does not end once a policy is realized but requires constant monitoring...to determine whether a policy or governmental action is positively or negatively affecting the determinates of health...” (p.50)

Methods: This study is a quasi-experimental case-control natural experiment in which the various state-level policies are the independent variables and the states’ COVID-19 outcomes are the outcome variables.

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Data will be collected from publicly available data on the state legislature websites, the U.S. Census Bureau and the CDC websites. This secondary data analysis does not pose any risks to human research participants.

The compared COVID-19 vaccination and population health outcome rates will be captured at the time the law is effective, then monthly.

Conclusions/Implications: This research is in progress and will help inform best practices for policy makers and public health officials for the current and future pandemics and epidemics.

Perspectives on Effective Patient-Provider Communications with Filipino Patients

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Purpose/Aims: Investigations are needed to determine how culturally and linguistically appropriate services (CLAS) could be adjusted to meet the health needs and address linguistic health inequities among Hawaii's Filipinos with limited English proficiency (LEP), which have been exacerbated by the Covid-19 pandemic. Our study will (1) explore context-specific factors associated with the use of interpreters for Filipino LEP patients (inpatient and outpatient) in Hawaii, (2) assess barriers and facilitators of effective patient-provider communication, and (3) develop an action plan and recommendations to improve the provision of CLAS for Filipino LEP patients.

Background: Effective culturally informed communication is the foundation of safe medical care, but this can be difficult when providers and patients do not speak the same language. LEP can increase the risk of miscommunication, decrease access to care, and lead to poor health outcomes and increased healthcare costs. National CLAS standards provide recommendations on language assistance for LEP patients via professional medical interpreters (PMIs) to improve health care quality and patient satisfaction, respond to demographic changes, meet accreditation standards, and decrease liability. Unfortunately, across healthcare settings the use of interpreters is suboptimal or fails to meet national CLAS standards. This, in part, is due to using family members as interpreters, which could be influenced by cultural beliefs or lack of understanding for the need of PMI for effective patient-provider communication, but little is known about such preferences in Filipinos. Furthermore, Hawaii's nursing workforce includes a substantial number of people of Filipino background, some of whom speak Filipino languages.

Methods: We will survey and interview PMIs who speak Filipino language(s) (N=10-15). Online survey will assess demographics (e.g., gender, education, years of experience), and Zoom®-based 90-120 minutes interviews with follow-up participant validation will examine PMIs' perspectives on patient, provider, and system levels factors. PMIs will be recruited through the largest interpreter company in the Hawaii; most are immigrants to the U.S. from the Philippines.

Research Design: The multidisciplinary research team includes cultural expert, community collaborator, and researchers from nursing and health psychology. Credibility of data will be ensured by interrater reliability, participant and community-based collaborator validation, and debriefing with mentors who will also help resolve possible disagreements in analysis.

Assessment of Findings: Interpreters will describe barriers and facilitators to effective patient-provider communications with Filipino patients with LEP. The study findings will also identify communication preferences and needs of Filipino LEP patients and will explore the communication quality when using Telehealth (e.g., video remote interpreting).

Implications: This study findings will help to understand the extent of CLAS issues in Filipinos and will be discussed with community collaborators and key organizations (e.g., interpreters, nursing, and Filipino organizations) to develop action plans and recommendations on how to improve CLAS provision for Filipino LEP patients. Findings will guide the development of a larger research grant proposal to develop and test an intervention to improve CLAS. The study findings could provide important information for health providers and key stakeholders, including nurses who are health care representatives and liaisons, patient advocates, and facilitators of effective communication.

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COMMUNITY & PUBLIC HEALTH

Developing a Virtual Reality Training Prototype for Adult Family Home Workforce

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Purpose: This research presentation focuses on the training and work-related health and safety protection needs of the adult family home (AFH) caregiver workforce.

Background: AFHs (also called adult foster or board homes) are the long-term care option for older adults and people with disabilities who desire to live and age in a residential environment. With one to two certified caregivers on duty each shift, these licensed neighborhood homes provide 24-hour care and essential services to a small handful of unrelated residents who often have complex health needs. Nationally there are more than 34,000 AFHs. Despite the demand for and growth of AFHs, research about AFHs is scarce. One particularly understudied area regards the training competencies and health and safety of the AFH caregiver workforce. The COVID-19 pandemic furthers the concerns about this workforce's preparation and well-being—both are associated with the quality of care provided. Through a business-academic partnership, we launched a multi-phased research project aiming to create an interactive, accessible virtual reality (VR) training system tailored to AFH environments. Technology-enabled virtual environments are a 3-dimensional environment mimicking the relevant, realistic environment for learners to interact with objects, messages, and signals in the virtual environment. While some industries have used VR for worker health and safety training, it has not been used in the AFH industry. In this first study, we focused on identifying knowledge and skills central to AFH caregivers' abilities to deliver quality caregiving and manage work demands to prevent injury or illness.

Methods: Adults working at an AFH in our state, completing certified nurse assistant or home care aide training or certification, and having at least one month of caregiving experience at an AFH were recruited. Individual interviews were conducted over Zoom. Participants were asked about caregiving experiences, including work-related injuries and illnesses, and the types of training they received and wished to have before entering the industry.

Results: Eleven (50%) participants were AFH owners who continued engaging in daily caregiving, ten (45%) were caregivers, and one worked as a caregiver and AFH consultant. Twelve (55%) participants self-identified as female; 14 (64%) were racial/ethnic minorities; 13 (59%) had a college (n=10) or graduate (n=3) degree (including education outside of the US); and ages ranged from 25 to 75 years (*M*=39, *SD*=15). Eighteen (82%) participants reported experiencing injuries or illnesses resulting from caregiver roles. Musculoskeletal problems caused by physically intensive tasks, bending, or consistently on their feet and walking were common. Physical injuries (e.g., scratches, human bites, or facial injuries) caused by AFH residents' aggressive behaviors were also common. Psychological distress and trauma were noted in the participants' narratives, yet psychological injuries were hardly mentioned as on-the-job injuries or illnesses.

Conclusion: This study generates new knowledge about the AFH workforce's training and worker health and safety needs and substantiates the need for further research on this growing industry. The results serve as a basis for priority content areas for integrating caregiving and worker health and safety training in the VR training system prototype for efficacy testing.

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Critical Care Nurses' Attitudes & Barriers to Central Venous Access Device Care

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Purpose: The purpose of this study is to evaluate a multi-hospital system's adult critical care registered nurses' fidelity to central line nursing care under current education and leadership programs. The study aims to difference or associations in nurses' intention, current practice, or desire to practice evidence-based central line care and maintenance guidelines.

Background: Effective care in the intensive care unit (ICU) relies on nurses' adoption and consistent practice of evidence-based infection prevention guidelines. Central line associated bloodstream infections (CLABSI) account for approximately 60%- 87% of hospital acquired infections resulting in prolonged hospital stays, increase health care costs and patient mortality. Existing generic education and practice mandates do not take nurses' perceptions of barriers to practice into account and there continues to be a gap between what is recommended and what is practiced.

Methods: This study will be conducted using a non-experimental, descriptive correlational design using a convenience sample of 490 adult critical care registered nurses currently practicing at the bedside in the adult critical care setting in a multi-hospital system. Employed, travel and per diem nurses who provide central venous access device (CVAD) care that do not hold a leader or educator title will be invited to participate. A researcher-developed survey adapted from Ajzen's Theory of Planned Behavior recommendations will be used to collect data from participants to collect data related to knowledge of CVAD care, attitudes toward adhering to the guidelines, and perceived barriers to practice.

Assessment of Findings: Descriptive statistics will be used to describe the study sample; totals and percentages for categorical data such as ICU setting, current role, and specialty certification, mean/median/mode for ordinal data such as highest degree earned, and number of patients cared for. Multiple regression analyses will be used to determine differences or associations between critical care nurses' intention to practice as directed by the guidelines and their 1) knowledge of the existing CLABSI prevention bundle, 2) perception of value/effectiveness of practicing CLABSI prevention care 3) perception of importance of CLABSI prevention to nurse peers, leaders, physicians, and their 4) perception of ease or difficulty to practice

Conclusions/Implications: This study provides a unique exploration of critical care registered nurses' desire and intention to adhere to evidence-based infection prevention guidelines. Upon completion, the outcomes of this study will be used to shape future leadership and education interventions that are most beneficial to support good nursing practice, close CVAD care practice gaps, address systems issues and strengthen the partnership between nurses, leaders, and educators to reduce or eliminate preventable hospital-acquired infections.

Implementation of Pupillometry Amongst Severe Traumatic Brain Injured Patients

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Background: Of the 1.7 million people who will suffer from a traumatic brain injury (TBI) each year in the United States, 10-15% of them will be deemed to have a severe one (a Glasgow Coma Scale score of <8). Up until implementation of pupillometry amongst severe TBI patients, invasive intracranial devices (such as external ventricular drains) were the only objective way to detect further neurological deterioration.

Problem: Current practice in the intensive care unit does not include the regular use of pupillometry to assess for pupillary changes in patients with severe TBIs. Therefore, subtle pupillary changes go unnoticed and opportunities for early intervention or secondary injury prevention go missed.

Objective: To develop and educate on a pilot project for the standardized use of pupillometry in the neurology intensive care unit. After staff are educated on pilot procedure, implement the protocol with a target goal of 80% staff compliance utilizing the pupilometer at critical times and notifying providers with critical findings. Ultimately, the neuro ICU nurses educational growth of pupillometry use and interpretation will be assessed utilizing a pre and posttest.

Methods: To assess for educational growth a pre and posttest will be administered at the start and finish of the 8-week testing period. Surveillance of compliance with pilot procedure will be assessed using audit tools administered to nurses each shift (day and night). The tool will have spaces for RNs to write the pupil size/NPi for each critical time mark (within 2 hour of admission to the ICU and q 4 hours for first 5 days of the patient’s admission). The audit tools will then be collected at the end of the 8-week period and be validated using a thorough chart review.

Results and Conclusions: Implementation of the project starts September 20th with the launch of the Epic pupillometry order set “go live.”

Nurse Handoff Standardization in a Pediatric Intensive Care Unit

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Purpose/Aim: The first aim of this quality improvement project is to create a systems-based, standardized nursing handoff in a pediatric intensive care unit with input from key stakeholders. The second aim is to implement the standardized handoff process. The third aim is to evaluate the adherence to the standardization and its impact on nursing perceptions of handoff quality.

Rationale/Background: Nurse handoff consists of the transfer and acceptance of patient care responsibility and requires effective communication to ensure continuity and patient safety. Inadequate handoffs are frequent and persistent issues in hospitals contributing to patient safety concerns and adverse events including treatment delays, falls, wrong-site surgery, and medication errors. The standardization of nurse handoffs reduces general adverse events and errors. Additionally, the standardization increases effectiveness of communication, satisfaction, organization, and overall quality of the handoff.

Method: This project utilizes the Plan-Do-Study-Act (PDSA) methodology, which is validated as an effective model for healthcare quality improvement. A standardized shift report template and checklist was developed with input from key stakeholders. Nursing staff will receive the information and education by way of staff meetings, secure e-mail, and one-to-one interactions with the project leader and unit representatives. There will be specific information provided on the role of both the oncoming and off-going nurses, the sequence and structure of the handoff, and documentation expectations in the electronic health record. To evaluate and measure the effect of a standardized handoff process on the nurses' perceptions of communication and quality of handoff, the Medical Intensive Care Unit Shift Report Communication Scale will be used pre and post-implementation. Additionally, observational audits will be conducted to track adherence to all standardized components.

Outcome/Findings: The evaluation of standardized handoff adherence and use will be tracked and reported as a percentage at both the one and three-month time period post-intervention. Pre versus postimplementation data collected from the Medical Intensive Care Unit Shift Report Communication Scale will be compared quantitatively using independent t tests. This will identify if there is improvement in overall perceptions of nursing handoff and if the results are statistically significant.

Conclusion: Evaluation of outcomes will determine the effectiveness of the handoff standardization in improving nurses' perceptions of communication and quality of handoffs. The clinical implications of this project are a standardized handoff process, potential improvement in overall quality of nursing handoffs, and possible decrease in general adverse events and errors related to handoffs. Future PDSA cycles may be required to modify the standardized template and handoff process based on initial findings. Recommendations for future undertakings should include ongoing measurement of adherence and perceptions, identifying and addressing barriers, and evaluating the impact of the standardized handoff on patient safety.

Professional Quality of Life and Nurses' Communication Patterns during COVID-19

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Background: Nurses employed in high acuity environments such as the Emergency Department and Intensive Care Unit frequently care for patients and families experiencing a variety of life-threatening illnesses/diseases. This exposure to high-stress situations, combined with limited or absent resources, may have positive (compassion satisfaction) or negative (compassion fatigue/burnout/secondary trauma) consequence(s) that may influence the nurse's communication with their patients, families, and peers. In the current COVID-19 pandemic, these experiences may be significantly profound, potentially affecting the longevity of those in the profession.

Objective: To examine relationships between compassion satisfaction (CS), burnout (BO), compassion fatigue (CF)/secondary trauma (ST), and perceived levels of communication difficulty in emergency room and intensive care unit nurses employed at a health care system. In addition, this study will compare these findings to a previous pilot study completed before the COVID-19 pandemic.

Methodology: The study design is descriptive correlational with a focus group. Data will be collected through self-administered questionnaires and one on one interviews. Participants will complete an online survey containing the Professional Quality of Life Scale (ProQOL), the Silencing Response Scale (SRS), demographic questions, and whether the respondent is willing to participate in a short telephone survey. Qualitative data will be collected via Zoom interviews with nurses obtained from a subset of the original sample and snowball sampling. The questions will focus on a narrative descriptive phenomenological approach in which participants will expand on everyday patient care experiences they perceived as traumatic. This approach will identify perceived work productivity following a stressful or traumatic event and the relationships between the variables and the nurse's potential consequences for this experience.

Implications: Acknowledging the lack of CS in the workplace is the first step in addressing deficiencies in communication. The concept of professional quality of life and its relation to communication among nurses in high acuity environments has little research but is increasing with the current COVID-19 pandemic. With the nuance of improving communication as a form of nurse-patient engagement to promote safer care, further studies are needed to evaluate other contributing factors to professional quality of life and possible organizational resources to address this need.

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Pressure Injury Mitigation in Prolonged Care: Noninferiority/Superiority RCT

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Purposes/Aims: Aim 1 (superiority) Compare military transport surfaces (Talon litter only vs Talon + AirSupport mattress or Warrior Evacuation Litter Pad [WELP]) on skin interface pressure and skin microclimate (temperature and moisture) as indicators of pressure injury (PI) risk. Aim 2 (noninferiority): Determine if the Talon + AirSupport is noninferior to the Talon + WELP on sacrum/buttocks peak skin interface pressure.

Background: During military prolonged field care, casualties are at increased PI risk. The Talon foldable mesh litter is used under combat conditions. Previous research found high skin interface pressure and impaired perfusion on the Talon. The AirSupport (72X23X3 inches ~ 5lbs), is a prototype mattress for use under far forward operational conditions. It has a 5 cm wide cutout to offload sacrum/coccyx pressure and mitigate increased skin temperature. The WELP (72x23X2 inches ~ 10lbs) is the current standard in the operational setting. Consistent with PI conceptual models, multiple risk factors were assessed.

Methods: Healthy adults stratified based on body fat %; randomized to three groups: (1) Talon (n = 15); (2) Talon + AirSupport (n = 35); (3) Talon + WELP (n = 35). One hour flat/supine. For superiority, the alpha was set at .05. Noninferiority was declared if the peak interface pressures on the sacrum and buttocks on the AirSupport were not worse than the peak pressures on the WELP by a margin of 25 mm Hg.

Outcomes: 85 subjects. Aim 1 (Talon vs AirSupport/Talon vs WELP). The Talon had significantly higher peak pressures on all body surfaces, but a significantly smaller increase in sacral/buttocks skin temperatures. There was no significant difference in changes in sacral/buttocks skin moisture on any surface. Aim 2 (AirSupport vs WELP). The 97.5th upper confidence limits for the mean differences in sacral/buttocks peak pressures on AirSupport versus WELP were below 25 mm Hg, establishing noninferiority of the AirSupport. The sequential superiority analysis found the AirSupport was superior to the WELP for the peak interface pressure on the sacrum, occiput, and heels, but not the buttock. However, peak pressures were lower than 40 mm Hg on both surfaces. There was no significant difference between the AirSupport and WELP in the sacral/buttocks skin temperature changes.

Conclusions/Implications: Consistent with previous research, the Talon presents a risk for PIs. The AirSupport and WELP were superior to the Talon for interface pressure, but the Talon was superior for skin temperature change. The sacral temperature increase on the AirSupport was not significantly smaller than the WELP, suggesting that the cutout did not affect skin temperature. The ~2°C increase in buttocks skin temperature on both AirSupport and WELP, translates into an approximately 22 mm Hg ischemic load, offsetting some of the beneficial effects of the low interface pressure. The AirSupport was non-inferior to the WELP on skin interface pressures and was also superior on all body surfaces except the buttocks. Both WELP and AirSupport mattresses provide effective pressure reduction, but further mattress development must consider skin pressure and microclimate. The PI risk from the Talon requires an immediate solution.

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The Effect of Sars-COV-2 Variant on Respiratory Features and Mortality

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Purpose: SARS-CoV-2 (COVID-19) has caused over 80 million infections and 973,000 deaths in the United States, and new mutations are linked to increased transmissibility. Despite the significant morbidity and mortality brought about because of the SARS-CoV-2 pandemic, many people remain averse to receiving vaccination despite previous studies that demonstrated vaccinations' effectiveness in reducing severe illness or death. Moreover, prior work demonstrated that certain respiratory symptoms clusters are associated with a higher risk of developing post-acute sequelae of SARS-CoV-2, otherwise known as "long-covid." Therefore, this study aimed to determine the effect of SARS-CoV-2 variants on respiratory features and mortality and to determine the overall positive effect of vaccination status.

Approach: A retrospective review of medical records (n=63,454 unique patients) using The University of California Health Covid Research Data Set (UC CORDS) was performed to identify respiratory features, vaccination status, and mortality. The UC CORDS dataset contains de-identified health records across all facilities within the University of California Health System, with greater than 700,000 unique patient records. Variants were identified using the CDC data tracker. To identify respiratory features, the top 40 most reported features across all body systems were extracted from each variant and represented as an ICD-10 code, translated into medical terminology, and then classified as either a lower or upper respiratory system feature.

Outcomes: Increased odds of death were observed among those not fully vaccinated (Delta OR: 1.64, $p = 0.052$; Omicron OR: 1.96, $p < 0.01$). Later variants (i.e., Delta and Omicron) demonstrated a reduction in the frequency of lower respiratory tract features with a concomitant increase in upper respiratory tract features. Vaccination status was associated with survival and a decrease in the frequency of many upper and lower respiratory tract features.

Conclusion: SARS-CoV-2 variants show a reduction in lower respiratory tract features with an increase in upper respiratory tract features. Being fully vaccinated results in fewer respiratory features and higher odds of survival, supporting vaccination in preventing morbidity and mortality from COVID-19. Providing education to individuals and communities is an essential function of nurses, and it is hoped that by equipping nurses with more quantitative data, nurses may better inform the communities in which they are providing care. Future work would be focused on exploring the relationship of temporal factors of vaccine administration and development of illness, more precisely controlling for social and demographic factors that may impact underserved groups from receiving vaccinations and investigating specific comorbidities that place individuals at greater risk for developing severe SARS-CoV-2. Lastly, this work will serve as a foundation on which to explore the relationship between SARS-CoV-2 infection and post-acute sequelae of SARS-CoV-2, or "long-covid."

CRITICAL / INTENSIVE CARE

Altered Metabolism in Sepsis

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Sepsis remains the number one killer of hospitalized patients around the world including 270,000 deaths annually in the United States. Sepsis costs to the healthcare system have been reported as high as 22 billion US dollars US annually for acute care hospitals, and as much as 5.5 billion US dollars additionally for skilled nursing care. Survival from sepsis is critically dependent on timely recognition of the condition. As there is no specific biomarker for the condition, sepsis remains difficult to diagnose in a timely manner.

Emerging science is beginning to understand the dysregulated host response to infection that occurs in sepsis. Dysregulated metabolic processes have been identified, but further research is needed to understand the metabolic phenotype associated with a patient with acute sepsis.

Altered metabolism of oxygen has been demonstrated to differ in critically ill patients with and without sepsis. The gold standard to measure metabolism in real time is indirect calorimetry (IC).

Monitoring of IC by nurses and other bedside clinicians has been recommended for clinical utility in a number of patient conditions, including prognostication post arrest and as a best practice in determination of metabolic need for enteral feeding. Although IC may be the gold standard there are limitations to its use at the bedside. It requires additional skill for clinicians, including a high degree of comfort caring for patients on a ventilator, as well as contraindications in patients who are difficult to oxygenate.

Metabolism of oxygen has recently been validated to be measured noninvasively using existing technology by monitoring tissue (skin) tension of oxygen (TcpO2) and carbon dioxide (TcpCO2). This noninvasive technology is recommended as a best practice for ventilated patients to determine carbon dioxide production over end tidal CO2 monitoring.

Our research is dedicated to Nursing Surveillance of Oxygen metabolism (VO2) for confirmation of sepsis. We are proposing to pilot the use of this skin sensor technology as a best practice in ventilated patients. From there we will use clinical data to determine parameters of oxygen consumption that differ in critically ill patients with and without a diagnosis of sepsis. We will also explore demographics and other metabolic parameters (serum lactate, TSH, blood glucose, serum CO2) to further understand the metabolic phenotype of patients with and without a diagnosis of sepsis. This research is based on our earlier published findings of statistically different parameters of oxygen metabolism in patients with and without a diagnosis of sepsis, using IC.

This work will demonstrate the fundamental metabolic nature of sepsis in human beings and apply that knowledge to use an existing technology to specifically differentiate septic shock from other forms of shock. This will enable objective, early identification of sepsis by nurses and save millions of lives with an opportunity for the early administration of empirically based antibiotics

Self-Care Measures and Glucose Control in Patients with Type 2 Diabetes

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Purpose: To examine the relationship between scores of diabetes self-care measures and glucose control by hemoglobin A1c in patients with type 2 diabetes

Background: Self-care plays a pivotal role in managing diabetes. Scores from diabetes self-care measures are assumed to indicate glycemic control in patients with type 2 diabetes. However, the link between scores of self-care measures and hemoglobin A1c has not been well established in patients with type 2 diabetes.

Methods: Fifty racially and ethnically diverse patients with type 2 diabetes were recruited from a university affiliated Diabetes Center and the surrounding community for participation in in-person survey. The survey questionnaires included SCI-R (Self-Care Inventory-Revised), the SDSCA (Summary of Diabetes Self-Care Activities), and DSMQ (Diabetes Self-Management Questionnaire). Hemoglobin A1c was measured by fingerstick point of care test. Descriptive statistics were used for sample characteristics. A Pearson's correlation was performed for the relationship between the three diabetes self-care measures scores and hemoglobin A1c.

Findings: The sample included 54% females. The mean age of the participants was 55.9 (±7.56) years old, with a mean duration of diabetes of 10.09 (±8.17) years. The average hemoglobin A1c was 7.06 (±1.40) %. The mean sum score from the SCI-R, SDSCA, and DSMQ was 60.93 (±15.75), 3.91 (±1.18), and 7.57 (±1.93) respectively. The score of the DSMQ was negatively correlated with hemoglobin A1c (r = -0.30, $p< 0.001$). In contrast, the score of SCI-R and the SDSCA did not show a statistically significant correlation with HbA1c. Among the five subscales of the SDSCA (General Diet, Special Diet, Exercise, Blood Sugar Testing, Foot Care), only the General Diet was negatively correlated with hemoglobin A1c (r = -0.32, $p< 0.001$).

Conclusion: Consistent with previous studies that reported various findings on the relationship of SCI-R, SDSCA, and DSMQ with hemoglobin A1C, this study found only DSMQ was significantly correlated with hemoglobin A1c. Further investigation is needed with a larger sample with consideration of potential covariates to validate the diabetes self-care measures against hemoglobin A1c and to examine the performance of the instruments in predicting glycemic control among patients with type 2 diabetes.

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Using Diabetes Technology in Older Adults Dyads to Promote Collaboration

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Purpose/Aims: To describe how older adults with type 1 diabetes and their care partners (CPs) engaged during an intervention using continuous glucose monitoring (CGM) with a data-sharing app. CPs were able to continuously see the person with diabetes (PWD) glucose levels and receive glucose alerts using a CGM data-sharing app.

Rationale/Conceptual Basis/Background: PWD frequently regard diabetes as "*their own illness*," whereas CPs may view the illness as more shared. Yet, when a PWD and their CPs share the same appraisal, diabetes is "shared," collaboration and support are more frequent. Research shows that improving collaboration and communication between PWD and CPs supports quality of life benefits, lowers PWD and CP distress, increases relationship satisfaction, and, for those with moderately elevated A1c, can lead to improved glycemic levels. Thus, we developed a multi-faceted diabetes care and education intervention for PWD and their CPs using CGM with a data-sharing app. The telehealth intervention, called Share plus, consisted of a dyadic appraisal of diabetes, communication strategies, problem-solving strategies, and action planning around sharing glucose data.

Methods: Dyads (n=10) received training in CGM communication, problem-solving, and developing action plans over 12 weeks during three intervention sessions with a diabetes educator. Data from the intervention sessions were recorded. Additionally, PWD and CPs were interviewed post-intervention to provide overall program feedback. Content analysis was used to analyze the three intervention sessions and the post-intervention interviews that were completed separately for PWD and their CPs. Open coding was used for the first three diabetes intervention sessions and the post-intervention interviews, resulting in a preliminary code book. Team members used the code book to code the subsequent intervention sessions and interview data. Codes were then organized into categories representing participants' views of the key aspects of the Share *plus* intervention.

Assessment of Findings/Outcomes Achieved: PWD, on average, were 67 years of age, and CPs were slightly younger, 63 years of age. The sample was 100% White, and the majority had college degrees. Most dyads reported having spousal relationships, with one dyad reporting a parent-child relationship. Dyad discussions during the three intervention sessions centered on the idea that diabetes management was the responsibility of the PWD. Dyads initially reported good communication patterns but then shared unsupportive communication in subsequent intervention sessions. Initially, CPs reported less engagement in monitoring CGM data and set less stringent alert settings. In post-intervention interviews, dyads shared how they experienced increased feelings of shared responsibility for diabetes management. Dyads also shared additional positive experiences with monitoring glucose trends that emerged as part of the Share *plus* intervention. Overall, the dyads' post-intervention feedback focused on the positive influence of the Share plus intervention on promoting positive communication habits.

Conclusions/Implications: The Share *plus* intervention provides a strategy for increasing CP involvement in diabetes management and positive, supportive communication when using CGM with data sharing. Further research with a larger sample is needed to determine if the Share *plus* intervention improves glucose levels for older adults with type 1 diabetes.

Funding: This is an investigator-initiated study funded by a University of Utah College of Nursing Dick and Timmy Burton Grant. Dexcom provided a portion of the continuous glucose monitoring supplies.

Feasibility of Oura Rings to Assess Outcomes Among Inactive Adults with Type 2 Diabetes

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Purpose/Aim: Evaluate the feasibility of using Oura Rings to measure changes in sleep, physical activity, and heart rate variability among inactive adults with Type 2 Diabetes (T2DM) and diabetes distress participating in an integrative diabetes self-management program featuring Tai Chi Easy™ along with a non-diabetic support person.

Background: Self-management behavior is a critical aspect of effective diabetes care. Social Cognitive Theory proposes that cognitive processes promote self-management behavior by increasing knowledge, self-efficacy, and problem-solving skills. Tai Chi can improve glycemic control in patients with T2DM, with significant benefits seen with long-term adherence. Tai Chi can reduce stress and enhance self-care. It is also an accessible way to improve mobility and function in inactive adults due to pain, obesity, decreased mobility or balance, fear of injury, or other factors.

Methods:

Design: Quasi-experimental study.

Sample and Setting: A convenience sample of fifteen inactive adult participants aged 40-64 diagnosed with T2DM and diabetes distress, receiving primary care within a healthcare organization in South Central Arizona.

Measures and Procedures: Participants and their support person attend an in-person six-week Integrative Diabetes Self-Management and Support Intervention featuring Tai Chi Easy™ instruction twice a week for 90 minutes. Participants will engage in 50 minutes of Tai Chi Easy™ training and 40 minutes of self-management education and support using the standardized ADCES Diabetes Care and Education Curriculum. The curriculum covers prediabetes and diabetes basics, healthy coping, healthy eating, being active, taking medication, monitoring, reducing risks, and problem-solving. Tai Chi Easy™ is a form of mind/body self-care comprised of four components: Mindful Movement (exercises that gently move, relax and stretch the body, and improve balance and coordination), Breathing Practice (reduces stress by inducing the Relaxation Response™, increasing circulation and energy, and enhancing the body's natural healing processes), Self-Applied Massage (stimulates blood flow and improves energy), and Meditation (relaxes the body, centers the mind, and calms the emotions).

Objective measures of sleep (duration, efficiency, latency, timing, percent REM/deep sleep), physical activity (duration and intensity), and heart rate variability will be obtained using Oura Rings (www.ouraring.com), worn at all times unless charging. In addition, health status (height, weight, body mass index, blood pressure, waist circumference, and point-of-care Hemoglobin A1C) and perceived psychological health (Diabetes Distress Scale, Beck Depression Inventory, Posttraumatic Stress Scale-Civilian Version, Diabetes Quality of Life Questionnaire, and Cohen's Perceived Stress Scale) will be assessed pre-and post-intervention using reliable and valid measures. Oura Ring acceptability, appropriateness, and feasibility measures will be assessed post-intervention (range=4-low to 20-high).

Analysis Plan: Frequencies, percentages, and the mean change from pre- to post-intervention, along with the 95% confidence intervals, will be calculated for the outcome variables of interest.

Assessment of Findings/Outcomes Achieved: Data collection in progress.

Implications for Clinical Practice and Research: Incorporating Oura Rings to assess participants' responses to a novel integrative diabetes self-management program featuring Tai Chi Easy™ is a promising and feasible method to collect objective data supporting best practices and improving outcomes for high-risk patients.

DIABETES

Diabetes Screening for Native Hawaiian/Pacific Islanders in an Urgent Care Center

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Aim: This study aims to evaluate current diabetes screening practices in urgent-care settings for Native Hawaiian/Pacific Islander (NHPI) people who are not accessing care related to diabetes-like symptoms.

Background: The prevalence of diabetes mellitus (DM) in people of Native Hawaiian/Pacific Islander (NHPI) ancestry is associated with risk factors such as obesity, low socioeconomic status, and family history. NHPI people are 2.5 times more likely to be diagnosed with diabetes than the non-Hispanic White population. In 2007, the total direct costs of diabetes in the United States were $116 billion. By 2017, costs doubled to $237 billion. Prior research among NHPI adults reported that half of the participants had HgbA1c levels consistent with a clinical diagnosis of DM. Participants were unaware of the diagnosis, indicating a gap in the DM screening process. Early detection of DM can be invaluable in identifying and delaying the progression of the disease. The delay in DM diagnosis may be due to people not accessing primary care services. Urgent care centers (UCC) improve access to care for nonemergent visits and may provide an opportunity to screen high-risk NHPI people who otherwise would not seek healthcare. The hypothesis is why are people who access UCC without apparent signs of diabetes (thirst, unintentional weight loss, fatigue, poorly healing wound) and have risk factors of diabetes (NHPI/BMI >25/ sedentary lifestyle /positive family history of DM) not screened for diabetes.

Method: The research design will be a mixed-methods descriptive study. A retrospective chart review will be conducted (2017-2022) to evaluate current diabetes screening practices among UCC providers for NHPI people at one UCC. Data collected (inclusion criteria) will include NHPI ancestry, BMI >= 25, sedentary lifestyle, positive family history of DM, and >= 18 years of age. Exclusion criteria: diabetes diagnosis and pregnancy. Data analysis will include the percentage eligible for screening based on the chart review inclusion criteria versus the actual percentage screened for diabetes. In addition, two focus group sessions consisting of UCC providers (4-6/group) will be conducted to assess challenges and opportunities associated with diabetes screening for NHPI who met chart review inclusion criteria.

Anticipated Results: The percentage eligible for DM screening will be higher than the percentage of people screened for DM. Anticipated and assumed barriers to not doing a DM screening are lack of provider knowledge of high-risk indicators, priority management of another medical diagnosis, inefficient office workflow, and lack of resources for follow-up and management of DM.

Further Research: Data collected will determine if opportunistic screening for DM in NHPI increases the timely diagnosis of DM and thus delays the progression of complications related to DM. Follow-up research will address barriers observed, create solutions to obstacles, and assess the efficacy and success of interventions. Further research to evaluate behavioral and lifestyle changes when diagnosed early, as well as treatment regimen as mutually agreed upon by patient and provider, is recommended to understand successful DM management.

Conceptualizing American Indians with Type 2 Diabetes as a Vulnerable Population

Leandra Bitterfeld*, RN, Nursing, University of Colorado, Aurora, CO*

Introduction: The American Indian and Alaskan Native population living with type 2 diabetes is a highly vulnerable population because they live at the intersection of minority population status and chronic disease. The purpose of this poster is to present the various environmental, historical and intrinsic factors that influence health among AIAN individuals with T2DM and the relationships between these factors, using Flaskerud and Winslow’s Vulnerable Populations Conceptual Model (1998).

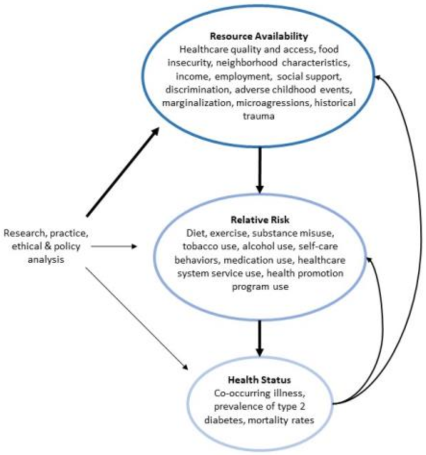
Methods: The Vulnerable Populations Conceptual Model (VPCM) understands vulnerability as stemming from low social and economic status and limitations in environmental resources and consists of three core concepts; resource availability, relative risk and health status. PubMed and CINAHL were queried using the search terms Native American/American Indian and type 2 diabetes and their related terms.

Results: Resource availability is foundational to the experience of vulnerability of AIANs with T2DM. These resources include environmental resources, human capital, social connectedness and social status. This population experiences food insecurity, inequitable access to quality health care, higher levels of poverty than the general US population and higher rates of unemployment. AIANs with T2DM find social support within their community but also encounter marginalization and microaggression from both within and outside their community. Finally, historical trauma has shaped the social status of AIANs within US society.

Relative risk is a product of lifestyle behaviors and he use of health-promotion services, which are shaped by the above described resource availability. Diet, exercise, substance misuse, tobacco use, alcohol use, self-care behaviors and medication use are the identified lifestyle behaviors that make this population vulnerable to poor health outcomes.

Health status is defined as the populations morbidity and mortality. T2DM rates among the AIAN population is twice that of the general US population and the fourth leading cause of death in the AIAN population.

Conclusion: The Vulnerable Populations Conceptual Model provides a framework for a multidimensional understanding of the vulnerability experienced among American Indian/Alaskan Native individuals living with type 2 diabetes. While Flaskerud and Winslow represent these three concepts as equally important and without linearity, most of the research from the last five years addresses resource availability, and there is a current focus on social determinants of health for achieving health equity. These evolutions in health research suggest that the model way be reconceptualized such that resource availability is considered the most upstream factor of vulnerability, with exposure to relative risk and health status following. A holistic understanding of the relationship between health outcomes and one’s social and physical environment is essential for providing competent and effective care.



Improving Diabetes Outcomes in Latinx Adults: *Salud Paso Por Paso* Protocol

***Julio Cesar Loya**, PhD, RN, College of Nursing, University of Arizona, Tucson, AZ*

Purposes/Aims: An aim of this protocol is to demonstrate the effective use of community-based participatory research (CBPR) principles and cultural tailoring of a physical activity intervention for Hispanic/LatinX adults with type 2 diabetes mellitus (T2DM). An additional aim is to highlight the implementation of this intervention during the initial stages of the COVID 19 pandemic.

Description of theory or method/definition of concept to be discussed: CBRP is a research approach that engages members of the community of interest as co-researchers and facilitates a co-learning process between the community and the researcher. This approach involves the community identifying priority problems and identifying potential areas of intervention to generate solutions. CBPR has several core principles, including participatory, cooperative, co-learning, systems development, empowerment, balance, and dissemination. The participatory principle includes engaging the community across the research process, which includes study design, implementation, and analysis. CBPR becomes cooperative when the researcher adapts to community needs by collaborating with community members. Co-learning places importance on learning as a shared experience. Systems development occurs when capacity is built within the community through the research process and facilitates the empowerment through shared decision-making. As these core principles evolve, research and action achieve a balance and findings are disseminated, which can lead to further action.

Logic linking theory/concept/method to practice or research: CBPR is an approach that is well-suited for conducting biobehavioral change research with underrepresented populations. The *Salud Paso por Paso* study was completed with a sample of Hispanic/LatinX adults with T2DM recruited from a free clinic in Tucson, Arizona. The researcher developed study components in partnership with key stakeholders from the clinic, which included healthcare providers, patients, and volunteers. The researcher is a member of the community and grew up in the geographical area served by the clinic. Culturally tailored components of the physical activity intervention included delivering study materials in Spanish, simplified language of educational materials to engage participants with low literacy levels, providing the intervention in a community setting with which participants were familiar and comfortable, and the researcher sharing the same cultural background and primary language of participants. As the study was underway, the emergence of the COVID-19 pandemic in March 2020 necessitated adjustments to the protocol and interventions to ensure the safety of the participants and the researcher. In keeping with CBPR principles, the researcher consulted and partnered with participants to ensure that appropriate physical distancing was maintained, and masks were worn during intervention and education session. Using CBPR principles to form partnerships with community stakeholders such as clinic staff and patients increased the likelihood of intervention acceptance and feasibility.

Conclusion with statement about utility of the theory/concept/method for practice or research: CBPR has the potential to improve the health of underrepresented populations that bear a disproportionate burden of chronic conditions such as Hispanic/LatinX individuals and T2DM. As the diabetes burden continues to exacerbate in the United States and globally, using CBPR as a methodology serves to elucidate effective ways to ameliorate poor health outcomes in underserved populations.

Role of Short Message Service on Retention in the Medication-Assisted Treatment Clinic

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Background: The opioid epidemic is a global crisis where deaths due to opioids continue to rise even though there are treatment options. There are multiple different treatment options that all share the challenge of low retention rates. Low treatment retention can be caused by multiple different scenarios, such as difficulty with accessing a treatment center, treatment plans that are difficult to follow, and lack of adequate support. The treatment utilized at the medication-assisted treatment (MAT) clinic this quality improvement (QI) project takes place is Suboxone treatment (buprenorphine and naloxone). Patients enrolled in the MAT clinic are all voluntarily seeking treatment for opioid use disorder. This MAT clinic offers low-barrier treatment options and is in the rural Pacific Northwest. Low barrier clinics provide treatment by reducing as many barriers as possible such as walk-in treatment, flexible treatment, and rapid start options. A barrier this MAT clinic is often confronted with is difficulty contacting patients when they are not in the clinic. Currently, the only form of communication that is used between the clinic and patients is phone calls. Many patients have shared they do not answer phone calls and would rather receive text messages.

Purpose/Aims: The purpose of this quality improvement (QI) project is to explore if the integration of short messaging service (SMS) into clinical process improves retention rates in the MAT clinic. Retention in treatment is when patients continue to engage in treatment which is associated with improved outcomes.

Methods: This is a quasi-experimental QI project that is in the process of being conducted in the MAT clinic in the rural Pacific Northwest. This QI project will compare treatment retention rates pre-intervention versus post intervention.

Implications: The results of this QI project will determine if utilizing the current available resources of SMS to provide clinic reminders will improve treatment retention and overall outcomes. The results will also show the potential for future use of SMS in this MAT clinic.

Technology for Spaced, Flipped Learning with Retrieval Practice in Pathophysiology

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Aims:

1. To use spaced learning with a flipped class, case-based seminar discussions, and retrieval practice to increase engagement and improve understanding of pathophysiology in the first term of nursing school.
2. To reinforce growth mindset with weekly reflection of learning to increase confidence with learning complex material

Rationale/Background: To build a workforce that reflects demographics of the country, nursing schools recruit diverse students. Targeted teaching strategies are essential for success of students who might have increased academic barriers. Remote education during COVID, when many students took anatomy-physiology prerequisites, may contribute to academic barriers. Pathophysiology is a foundational course, often taught the first term of nursing school. Teaching strategies that increase learning in science courses include spaced learning and retrieval practice. In addition, a growth mindset and reflection support learning. Technology can facilitate these successful teaching/learning strategies.

Brief Description of Project: Nursing students frequently struggle to understand and apply pathophysiology. Pathophysiology, in the first term of our nursing program, was redesigned with spaced learning to improve understanding. Spaced learning included a flipped-class, with recorded lectures that learners viewed at their convenience prior to seminar discussion of clinical cases aligned with lecture. Seminar included questions with audience response, pairing/sharing, and small group discussion. Specific videos and reading were assigned for additional review. Practice questions at knowledge and application levels, with immediate feedback, supported retrieval practice. Each week culminated with a graded quiz where learners had three opportunities to earn full credit, and a one-minute reflection on learning with different weekly prompts.

Outcomes:

- In anonymous course reviews, students highly rated recorded lectures, with common themes of “a benefit to view lectures at an ideal time for learning”; being able to slow down or stop the lecture to think or answer questions posed; being able to go back to the lecture again. The prompt “course delivery method was effective” had 100% agreement, with 73% strongly agreed, even though COVID restrictions resulted in some synchronous WebEx seminars.
- Seminar comments: “the questions and seminars really make me think deep”; “I loved the structure of independent study lectures followed by seminar...easy to apply to situations with clients”; “engaging, fosters critical thinking”; “cases really helped me apply knowledge”.
- Spaced learning and retrieval practice comments: “multiple opportunities to learn in many ways”; “quizzes were great, evaluated my learning and helped me focus on important topics”.
- Growth mindset comments: “Growth mindset helped me know I don’t have to be perfect, that I can work hard and improve”; “It is a big school and I was surprised I got in...Growth mindset and doing well in first term helped me feel I belong”.

Conclusions/Recommendations: Technology supports many options for spaced learning. A flipped class with recorded lecture, followed by application in clinical cases and question prompts in seminar, assigned reading and videos, multiple no-stakes opportunities to practice answering questions, and a weekly graded quiz with multiple attempts for success, along with reinforcing growth mindset and learning reflection, were rated highly in improving understanding in pathophysiology and will be continued.

Storytelling: Bringing the Role of Primary Care in Rural Nursing to Urban Classrooms

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Purpose: The population of Intermountain West states mostly resides in urban areas. Rural areas are geographically isolated, creating logistical challenges to providing nursing students with rural clinical opportunities. Using video to tell personal stories about the life of a rural nurse working in primary care provides a glimpse of nurses leading rural primary care teams. The aim of this project was to use video to bring the role of primary care rural nurses to life in an undergraduate classroom at a large health science institution in the Intermountain West.

Background: Undergraduate nursing educators are challenged to provide rural clinical experiences for all students due to geographic distances and the paucity of RNs working in rural primary care. It is challenging to bring rural primary care nursing roles to life for students attending urban nursing programs. One way to bring nursing roles to life is through first person storytelling and collective sensemaking, allowing students to envisage a future career. Using a blend of video and facilitated discussion supports diverse learning needs of students in both classroom and clinic settings. We utilized a blend of storytelling through film and facilitated discussions to provide undergraduate nursing students with a glimpse of what nurses do as leaders in rural primary care teams.

Methods: Nursing faculty partnered with team of video managers and a rural primary care nurse to design a video story board depicting a day in the life of the primary care nurse. The video was filmed in the rural clinic using the nurse, clinic staff, and patient actors. The video was embedded into the pre-licensure community clinical course. All students in the course reviewed the video with facilitated reflection using the critical reflection framework. At the end of the discussion, students voluntarily completed a survey to better understand their interest in primary care nursing.

Assessment Findings: Sixty undergraduate nursing students viewed the video and participated in the facilitated reflection. During the reflection, participants asked follow up questions related to the responsibility serving as a nurse in a rural community. Several students acknowledged the opportunity for practicing at the top of an RN license and the great responsibility it is to serve a rural community as a leader on the primary care team. Only 22% of students completed a satisfaction survey; however, of those, 85% indicated interest in working in primary care. In addition to embedding the video in the course, it is freely available for all students and the community and has been viewed 321 times.

Conclusions: Our nursing program has increased the quantity of primary care nursing content by embedding online modules throughout the curriculum. However, it is difficult to expose all students to primary care clinical experiences. By using a blend of video storytelling and facilitated reflection, we can provide students with a real-life depiction of rural primary care nursing that allows them to visualize a nurse working at the top of their license and the unique attributes to working in rural primary care.

Games in the Classroom: Technology to Promote Nursing Student Equity and Participation

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Purpose: The purpose of this project is to determine the efficacy of incorporating technology with games in the classroom as a means of promoting equity and participation among prelicensure baccalaureate nursing students.

Background: Nurse faculty are continually searching for ways to incorporate technology into their classrooms to promote student engagement, learning, and retention. Researchers have found that classroom games can be used successfully to do that and more. When used effectively, games can also significantly contribute to creating increased equity and participation in classroom learning. Games in the classroom are a type of active learning technique which gets students involved in the process of gaining and synthesizing information along with their peers. Among nursing students, researchers have noted that active learning leads to increased retention of knowledge and improved critical thinking skills. In addition, students who may not otherwise participate due to social anxieties or other reasons, are encouraged to engage with their peers and problem-solve in real time.

Brief Description: As part of an education improvement project, gaming in the classroom is currently being trialed by faculty in several different courses. In each instance, to ensure equity and accessibility and to get all students involved, faculty place students into groups of 3-4, with one of the students in each group having access to either a smartphone or laptop. Questions and case studies are pre-loaded on the gaming platforms and students are tasked with answering the questions posed within a set time-frame. This promotes engagement and friendly competition in a non-threatening environment.

This project will be assessed using an online mixed method survey created by faculty. Both quantitative as well as qualitative data will be collected. Descriptive statistics and thematic analysis will be used to analyze the data. Project coordinators will also engage focus groups to elicit information about how faculty could improve the use of gaming for increased equity, learning, participation, and knowledge retention.

Assessment of Findings/Outcomes Achieved: Initial verbal feedback from students and faculty thus far has been positive. Games are currently being used successfully for a variety of activities and assessments, including pop quizzes, in-class group activities, to assess knowledge retention after content is taught, and to determine prior knowledge before teaching occurs. Students report enjoying the use of games to enhance learning and express a desire for more games in their classroom experience. Faculty report increased class participation and improved retention of material.

Conclusion: Experimenting with technology through games to assess student learning as well as increasing interactivity among students has been positive for students and teachers alike. Evidence supports using games in classrooms to enhance equity, participation, and knowledge retention among nursing students. Next steps include completing the project with students and faculty to determine best practices with using games in nursing education. Project coordinators will analyze data collected with plans to continue to incorporate gaming into nursing curricula and disseminate findings at a national nursing conference.

Using Technology to Promote Equity and Testing Success with NCLEX-RN®

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Purpose: The purpose of this project is to assess the effectiveness of using technology to promote equity and testing success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN®).

Background: One of the goals of faculty in nursing programs is to promote student success on the NCLEX-RN®. Students who do not pass this licensing exam on their first attempt experience distress, anxiety, and decreased confidence in themselves. Most schools of nursing have some type of course or learning platform to help prepare students for this exam.

A faculty committee at a college of nursing in the western United States identified the need for a new platform involving use of technology to increase equity and student pass rates on the NCLEX-RN®. One such technology platform is UWorld™ which is considered one of the top online programs to prepare nursing students for success on their licensing exam. After talking to students who passed the exam on their first attempt, it was discovered that the majority were purchasing UWorld™ on their own and highly recommended it. Those who did not purchase the program stated that cost was the main prohibitive factor.

Brief Description: As part of an education improvement project, faculty negotiated with leadership to offer a 12-month paid subscription to UWorld™ for all nursing students in their second, third, and fourth semesters. Students currently use the platform as part of existing nursing courses and are assigned weekly quizzes to complete. They are highly encouraged to review all rationales for each question. In their fourth semester, students also have access to two 100-question self-assessments with predictor feedback to inform them of their readiness to sit for the NCLEX-RN®.

The effectiveness of this project will be assessed using an online mixed method survey of students. Both quantitative and qualitative data will be collected. Descriptive statistics and thematic analysis will be used to analyze the data. Aggregate and anonymous outcomes of NCLEX-RN® pass rates will also be examined.

Assessment of Findings: Initial outcomes are consistent with improved NCLEX-RN® pass rates among students who use UWorld™ to prepare for their licensing exam. Students report enjoying UWorld™ and what it has to offer and the majority say the program helped them pass the NCLEX-RN®. Faculty state that they find UWorld™ to be beneficial and report using it in the classroom and post-clinical conferences to improve students' skills and promote knowledge gain and retention.

Conclusions: Although preparation for the NCLEX-RN® varies among nursing programs, it is essential to ensure that all nursing students are equitably prepared for this exam using evidence-based strategies. Employing UWorld™ technology to assist students with preparing for the NCLEX-RN® has been found to be beneficial and is associated with increased licensing examination pass rates.

Next steps for this project include completing data collection to determine best practices for preparing student nurses for the NCLEX-RN®. Project coordinators will analyze the data collected with plans to continue to incorporate test-taking technology such as UWorld™ into nursing curricula and disseminate findings at a national nursing conference.

Use of Voice Thread to Enhance Faculty Experience within an On-Line RNBS Program

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Purposes/Aims: Enhance faculty experience with teaching and social presence through the Voice Thread web-based tool. Within an online baccalaureate completion program (RN-BS), use Voice Thread to design course, curriculum and assessments while also contributing to overall sense of community and belonging. In addition, explore Voice Thread's access to diverse communication modalities including audio and video formats.

Rationale/Background: Faculty evaluations within a 100% on-line RNBS program reveal desire to enhance faculty experience with teaching and social presence through use of technology. The Community of Inquiry (COI) framework views social and teaching presence within the virtual learning environment as paramount to achieving higher educational experience. Lack of face to-face instruction, feedback and conversation present challenges for collaborative sharing of knowledge/opinion and open communication, all negatively impacting the feelings of community and belonging. Additionally, evaluations illustrate a desire for more diverse communication modalities for conversation, instruction and feedback, specifically requesting audio and video capabilities.

Undertaking/Best Practice/Approach/Methods/Process: Student evaluations and research provides extensive information for improving *student* experience within the on-line learning environment. Less focus is given to improving *faculty* experience. Historically, on-line teaching and social presence are supported through asynchronous communication, facilitation, and guidance via written assignments, forums and submissions. Voice Thread is a web-based tool allowing asynchronous, on-going, and collaborative digital communication using text, audio, and/or video. Voice Thread was introduced to faculty with the opportunity to trial within upcoming terms. Voice Thread provided multiple virtual trainings and OHSU Teaching and Learning Center (TLC) assigned support staff. Self-appointed faculty and TLC champions were established. TLC created a sandbox environment within the Sakai learning platform allowed faculty and TLC to create and trial assignments and integration. Courses first piloted Voice Thread using low stakes and non-pointed introduction assignments, as well as low stakes, interactive virtual lectures and announcements. The following term, Voice Thread further integrated into course design, curriculum and assessment through the following; faculty video grading and feedback, forum video threads for discussion, group/individual projects presented within video "gallery walk" interaction, and diverse options for posts including text, audio or video.

Outcomes Achieved/Documented: Two and a half terms of faculty evaluation illustrate optimism and positivity for the impact of Voice Thread on teaching experience. Early feedback shows appreciation the following; getting to know students better, putting faces to names and the ability "show up" more realistically- all important aspects of establishing community and belonging. Faculty also appreciate the ability to hear and use "tone" during communication, allowing interactions to feel more authentic. Additionally, the use of video and audio for student feedback may contributed to decreased faculty workload.

Conclusions: Voice Thread has potential to be an effective strategy to support and improve faculty teaching experience within the Community of Inquiry Framework. Voice Thread, with text, video and audio communication modalities, fosters an overall sense of community and belonging, often challenging within an on-line learning environment. On-going monitoring and evaluation are necessary to assure sustained faculty satisfaction and alignment with student perspective.

EDUCATION

A Usability Study of a Novel Electrocardiogram Simulator

***Rexanne Wieferich**, MN, RN, CVBC, CNL, Montana State University, Kalispell, MT*

Purpose: The project investigated the effectiveness of a novel electrocardiogram training software to determine the software's impact in instructing healthcare professionals as well as its usability.

Background: The 12-lead electrocardiogram is considered the "gold standard" of noninvasive diagnostic tools. Misplacement of electrodes or leads may cause diagnostic errors leading to unnecessary procedures that put clients at elevated risk for complications and morbidity. Unnecessary procedures also increase costs for clients and the healthcare system. A misplaced electrode may change the electrocardiogram patterns, concealing abnormalities such as myocardial infarction. A systematic review of ten studies found that only 50% of trained nurses and less than 20% of cardiologists were successful in accurate placement of leads V1 and V2. This is a concerning statistic. Attempts to locate a low-cost training simulator that would provide this necessary educational opportunity was unsuccessful.

Method: IRB approval and participant consents were obtained. Seventeen nurses, Emergency Medical Technicians, and nursing students participated. Participants were assessed using qualitative survey data capturing demographic information, experience with electrocardiograms, and general impressions before and after software use. Participants were from aged 19-54 years, had previous exposure to electrocardiogram acquisition, and were well distributed self-rated proficiency with respect to electrocardiogram electrode placement. Quantitative data was collected during the study in a control portion with no stimulus and an assessment portion which included virtual electrode placement and feedback. Heart rate, inter-beat interval, and galvanic skin response standardized over time, were used as measures of participant stress during software usage. Data were used to determine relationships between stress, satisfaction, and software usability and effectiveness across the participant group.

Outcomes: Results of the study pointed to a consensus on the effectiveness of the software, as the majority (>85%) found the software easy to use and believed they learned by using it. In the study it was found that higher initial confidence decreased overall stress and increased perceived learning, while experience had minor impact on stress or test scores. Test scores were independent of stress and experience, and elevated levels of participant confidence before the test lead to lower overall stress and higher usability ratings during and after the assessment was taken. The high ratings by the participant base and the standardized environment used lend validity to the study's results and the software being usable and effective in its goals.

Implications: Given the continued push to improve healthcare effectiveness and decrease misdiagnoses in clinical and emergency settings, simple, easy to use, and effective training solutions for electrocardiograms must be developed. To do so evidence-based approaches must be taken to assure that appropriate user bases can effectively use and learn from such trainers. While a pilot test, this novel simulation demonstrated the ability to train clinicians with a range of experience to properly place a 12-lead electrocardiogram.

RCT of Virtual Reality Effect on Nursing Knowledge, Behavior, and C'difficile Rates

***Jessica M. Phillips**, MSN, RN, NPD-BC, (PhD-c), Center for Nursing Excellence, UCLA Health, Los Angeles, CA*

Four percent of patients in the U.S. and 10% worldwide diagnosed with infection while in hospital. COVID impacts have led to greater Hospital acquired infections (HAIs) since 2020. HAI rates have increased despite current infection prevention control practice (IPC) educational approaches. C'*difficile* costs range from $11,000-17,260 per case. Nearly, 1 out of 5 patients are re-infected within 2-8 weeks and 1 out of 11 people over the age 65 diagnosed with C'*difficile* die within 1 month. Health system patient data for FY22 illustrated a high C*'difficile* infection rate, with multiple units underperforming when compared to the standardized infection ratio (SIR) or <1 goal. Gaps in the literature illustrated inconsistent links of education to practice, homogeneous study samples of novice or advanced beginners, a lack of reported higher-level outcomes like behavior and patient outcomes, and few active learning strategies. To close the gaps, the following research question will be explored: In a large academic health system setting, does virtual reality (VR) compared to traditional education (TE) modalities improve registered nurse knowledge and behavior; as well as, patient outcomes related to C'difficile practice? VR provides innovative active immersive lifelike learning, through screen based generated multi-media environments; low-risk environment for clinical skill/critical thinking; and allows learners to take a series of actions in response to a healthcare-related problem or situation with no risk of patient harm. Cluster randomized pre posttest control group design (RCT) was the most robust design selected to address the question. Registered nurses from six adult acute care units will be selected as the larger sample pool at two health system sites. These six units will be matched with one another based on equivalency in patient population to equal three pairs. One pair of two units will be randomly selected using a random number generator; wherein, one unit will be randomly assigned to receive the VR educational intervention and the other will be the TE control group. The final study sample will include all full-time equivalent registered nurses working on those two units, who do not decline participation. The study follows the standard process for required education, RNs are obligated to participate in the required C'diff education, with the option to decline participation in the study by emailing the PI for removal of scores. Aim 1 and 2 will test the effect of the delivery format on knowledge and behavior by measuring knowledge using the Cognitive, Affective, and Psychomotor Perceived (CAP) Learning Scale, a multiple-choice assessment, and scenario clinical skill score tool. Analysis will use simple comparisons using t-tests will test knowledge and behavior change scores (DV) between intervention and control units (IV). Aim 3 will compare the C'difficile rates at the unit level from baseline to post intervention. Rates will be collected from the health system dashboard. Descriptive data will be used to summarize participants (i.e., demographics) and C'difficile rates for study units. Analysis will compare infection rates, pre/post per group. Study implementation is underway and results will be actualized prior to the conference.

Perceived Learning of a Postoperative Care Virtual Simulation Among Nursing Students

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Purpose: To explore the user experience and perceived learning of undergraduate senior nursing students after participating in a Percutaneous Coronary Intervention (PCI) postoperative care low-cost virtual simulation.

Rationale/Conceptual Basis/Background: Due to the restricted access to PCI recovery rooms, virtual simulation was considered an option to train senior nursing students in postoperative care. Branching scenarios in virtual environments allow us to design learning situations that challenge the learner, require them to make a decision, and then present the consequences (Shorey & Ng, 2021). Moreover, branching scenarios enable learners to put their theoretical knowledge into a practical perspective. In the market, a plethora of software is available to design branching scenarios. However, due to budgetary constraints, a low-cost virtual simulation was developed by nursing faculty from a Costa Rican university using the tools presented in Moodle (a learning management system), free editing software, and semiprofessional recording equipment.

Methods: A descriptive, cross-sectional approach was utilized. An online survey was administered anonymously to 80 undergraduate nursing students enrolled at a Costa Rican university. The survey assessed the user experience and perceived learning of the learners that completed a branching scenario. The online survey was conducted from October to December 2021.

Assessment of Findings/Outcomes Achieved: All the learners (80) completed the survey. Concerning the user experience, 78 participants (97.5%) posited that the scenario was a fun and valuable way to learn and practice what they were studying. Additionally, they expressed that it was a stress-free and engaging learning activity that promoted critical thinking. On the same theme, 76 of the respondents (98.8%) considered the instructions and companion materials were pertinent and clear to what is expected of them. Concerning aspects like time and format, 78 students (97.5 %) reported the duration (15 minutes) of the scenario was adequate, and 79 (98.8%) participants mentioned the time destined to present the patient information was sufficient. Most of all, 98.8% would like similar learning activities across the nursing program. In the same manner, 78 participants (97.5 %) thought the scenario was a valuable learning experience. Regarding decision-making, 78 (97.5%) respondents consider the virtual simulation prompted them to make decisions about patient care and encouraged them to integrate theoretical knowledge while choosing the best option. Finally, 85% perceived that after completing the scenario, they identified their areas of improvement regarding PCI post-op care.

Conclusions: Based on the students’ perception, the branched scenario is an excellent alternative to understanding the interventions involved in caring for patients after PCI. In addition, it promoted the integration of theoretical content and practice and allowed them to think critically while making decisions regarding patient care. Future research is needed to assess the cohort´s performance in postoperative care in-person simulations after completing the branched scenario.

Accelerated Baccalaureate Nursing Student & Faculty Perceptions of Blended Learning

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Purpose: The purpose of this qualitative case study was to explore how faculty and students perceived the benefits and challenges of an accelerated BSN program utilizing a blended learning format.

Background: In response to the demand for baccalaureate-educated nurses, nursing schools offer an accelerated baccalaureate of science in nursing (BSN). The problem is nursing programs have used blended learning approaches, but it is unclear whether and in what ways accelerated BSN students benefit from this learning design. Blended learning being the use of traditional face-to-face learning in conjunction with synchronous or asynchronous e-learning.

Methods: A case study design was used to examine one nursing program for rich data through interviews with students and faculty. Knowles's (1984) adult learning theory served as the conceptual framework through which interview data were analyzed. Participants included 6 faculty and 7 students from 1 school of nursing in the western United States who provided their perceptions of an accelerated blended program through interviews. Data were analyzed using open coding to identify patterns that were thematically organized.

Assessment of Findings: Findings revealed that the combination of accelerated program design and blended learning makes accelerated blended learning (ABL) a distinct but effective teaching and learning approach despite reported frustrations. There were six themes that emerged, four overlapping between both students and faculty and two themes specific to student participants. ABL promotes student autonomy as they become more self-directed and self-regulated developing lifelong learning skills. Students reported new ways of flexible learning, information overload, and reinforced interpersonal connections with peers. Faculty reported the ABL design helped course organization but did not provide enough insight into what students did outside of course meetings. Across both groups, technology challenges were reported leading to student perceptions of decreased learning and faculty described a degree of inexperience and level of comfort.

Conclusions: Recommendations for improving ABL include careful review of implementation strategies, organizational design, and technology supports. Institutions need to understand and be aware of prior experience faculty have teaching with ABL and those with no online or in-person teaching experience should have access to support. Team taught courses should consider their policy for posting additional course content once the course is underway. There should be clear and organized approaches for each course including a well-articulated determination of how face-to-face time is offered and builds on knowledge students independently learned outside the classroom. The findings provide nursing program design insights that can be used to help ensure qualified, competent nurses enter the profession prepared to serve their communities and improve nursing education. With the growing need of qualified nurses to enter the workforce to care for individuals, nursing schools must establish effective innovative teaching designs that meet the learning and teaching needs. ABL is an emerging course design that is likely to be in more demand as the need for qualified nurses grows and this innovative approach can do this if designed and implemented effectively for both students and faculty.

Toward Inclusive Design of the EHR: Experiences of Registered Nurses with ADHD

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Purpose/Aims: The purpose of the proposed study is to explore the perceptions and experiences of electronic health record (EHR) use among registered nurses with attention-deficit hyperactivity disorder (ADHD) working in acute hospital environments. Two aims will be addressed: 1) Examine associations between registered nurses' ADHD symptoms (inattention and hyperactivity) and perceptions of EHR usability and workload; and 2) Describe the experiences of registered nurses with ADHD and their use of the EHR.

Rationale/Conceptual Basis/Background: Usability is defined as how well a system achieves specific goals with efficiency, effectiveness, and satisfaction in context of a user's needs. Poor EHR usability has been linked to clinician burnout, higher odds of inpatient mortality, and errors leading to patient harm events. These implications are associated with higher costs and strains on healthcare systems. There is a critical need for future research on EHR usability to better support the needs of healthcare workers, particularly with underrepresented populations (like ADHD) that may be disproportionately affected. There are no known studies examining nurses with ADHD (or any other developmental disability) and their use of EHRs, although ADHD is prevalent and many adults are undiagnosed. More research is needed to study how ADHD symptoms impact cognitive demands of specific professions, including medical workers with high ADHD traits. This study intends to address these gaps and generate new knowledge regarding registered nurses' use of EHRs.

Methods: The proposed study will use a mixed methods approach to obtain a comprehensive understanding. For Aim 1, we will use a descriptive correlational study design using cross-sectional data from self-reported questionnaires. This part of the proposed study will enroll registered nurses with and without ADHD. ADHD symptoms (inattention and hyperactivity) will be measured using the Adult ADHD Self-Report Scale. EHR usability will be measured using the System Usability Scale, and workload will be measured using the National Aeronautics and Space Administration Task Load Index. We hypothesize that high levels of inattention and hyperactivity will be significantly associated with poorer EHR usability and workload. For Aim 2, we will use a qualitative grounded theory study design to conduct interviews with registered nurses with ADHD.

Results: Results are pending. We expect to be able to show differences in the experience of EHR usability. Themes describing barriers and facilitators to EHR use among registered nurses with ADHD will be described to support the development of an emerging grounded theory illustrating the psychosocial processes registered nurses with ADHD experience while using EHRs in the workplace.

Implications: This proposed study will provide evidence of how ADHD symptoms impact registered nurses' perceptions of EHR usability and workload. No studies have investigated phenomena in this population, and this study should provide support for developing interventions that better meet their needs, ultimately to improve EHR usability.

Relationship between Anesthetist Burnout and Electronic Records Drive Patient Acuity

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Purpose/Aim: The proposed study aims to explore the relationships between Certified Registered Nurse Anesthetist (CRNA) electronic health record (EHR)-derived patient acuity scores and self-reported fatigue and burnout in the past 30 days.

Rationale: Burnout and fatigue are occupational conditions associated with poor patient care, higher 30-day mortality rates, medical errors, decreased patient satisfaction, and adverse patient safety events. Studies have linked high levels of emotional exhaustion related to increased unmanageable workload and acuity of patients. CRNAs consistently report high levels of occupational burnout, disengagement, and exhaustion. They are subject to high-risk stressful work environments with immense production pressure. They are at a greater risk of suicide than the general population. Along with being twice as likely as their counterparts to not seek help during suicidal ideation and depressive episodes. This study aims to explore the connection between patient acuity and fatigue and burnout levels among CRNAs. If this connection is established passive data collection such as EHR reports can be utilized to decrease CRNA burden making interventions easier to institute. Ultimately improving care, safety, and well-being for both the patient and the CRNA.

Methods: The proposed mixed-method study will include 100 full-time CRNAs from one hospital system who will be recruited through paid participant incentives to participate in this research study. These participants will be asked to complete the Maslach Burnout Inventory (MBI) and the Occupational Fatigue Exhaustion/Recovery Scale (OFER). The MBI is a self-report measure of burnout comprising three subscales-Emotional Exhaustion, Depersonalization, and Personal Accomplishment. While the OFER measures chronic work-related fatigue traits, acute end-of-shift states, and fatigue recovery between shifts. Both scales have acceptable validity and reliability among nurses. ASA scores have been in use for over 60 years. They are used to assess the patient’s preoperative medical co-morbidities which is useful in assessing medical acuity and risk. Once the MBI and OFER scales are administered an EHR report of each participant’s mean average ASA score for the past 30 days will be generated. These mean ASA scores will provide a representation of the average acuity and workload of the patient under the CRNA’s care based on the severity of comorbidities and disease processes. Correlations between the burnout and fatigue measures, their subscales, and mean ASA scores will be assessed.

Anticipated Results: Although pending, we anticipate that there will be a positive relationship between higher-than-average ASA acuity scores and increased burnout and fatigue. If a correlation is identified, passive EHR data collection monitoring of the average ASA scores of the patients cared for by each nurse anesthetist may be useful to identify high-risk burnout and fatigued employees.

Implications and Future Research: EHR data report utilization of average ASA acuity scores has the potential to be wide spreading across all healthcare disciplines that take care of our surgical patients. If strategies to identify employees at high risk for burnout and fatigue can be found, then anti-burnout and fatigue mitigation strategies can be proactively implemented and targeted.

Feasibility Study: A Phone App to Improve Autonomic Stress Responses to Chronic Pain

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Purposes/Aims: This feasibility study examines a multicomponent phone app intervention integrating virtual reality nature immersion (VR) and paced-breath training with heart rate variability biofeedback (HRVB) for chronic pain and fear of movement (kinesiophobia) in older adults with knee osteoarthritis.
Primary Aims: (1) Evaluate adherence/satisfaction of VR+HRVB phone app use in older adults with knee osteoarthritis, chronic pain, kinesiophobia and examine 4-week follow-up sustained use patterns/effects, and gain descriptive evaluations of app use, (2) Explore preliminary intervention effects of a VR+HRVB phone app intervention to: reduce pain, pain stress, and increase HRV among older adults with knee osteoarthritis, chronic pain and kinesiophobia, (3) Examine the role of interoception to moderate or mediate the effects of VR+HRVB in older adults with knee osteoarthritis, and, gain descriptions of kinesiophobia experiences.
Rationale/Background: Many individuals with knee osteoarthritis have phobic anticipation of movement-related pain that exceeds actual pain ratings with physical activity. Hypervigilance associated with this kinesiophobia contributes to chronic stress responses accompanying chronic pain through prolonged sympathetic nervous system stimulation. HRV decreases when sympathetic nervous input is dominant. Slow-paced breathing can induce respiratory sinus arrhythmia which downregulates the associated sympathetic responses present in chronic pain and kinesiophobia. This in turn increases HRV reflecting autonomic nervous system shift to parasympathetic dominance promoting physiologic resilience. Immersion in a VR nature scene further distracts from pain-related fear and movement anxiety and has demonstrated altering pain processing. Combining VR- induced distraction to practice paced-breathing techniques with HRVB reinforcement may improve parasympathetic nervous regulation. Re-balancing autonomic nervous output may result in improved self-regulation of stress, decreased pain, and increased interoceptive accuracy in older adults with knee osteoarthritis. This study addresses an evidence gap in knowledge of the feasibility of a VR+HRVB phone app training and effects for older adults with knee osteoarthritis.
Methods: Mixed method sequential explanatory QUANT-qual single arm trial of 36 older adults, age 45-74, with knee osteoarthritis, chronic pain and kinesiophobia utilizing a VR+HRVB iPhone app for 7-10 minutes, twice daily, 5 days/week for 8 weeks with 4 weeks of follow-up.
Measurements/Analysis: Pre-post intervention quantitative data for statistical comparison (patterns of change) and mediation/moderation testing: PROMIS-29 Profile v2.0, Multidimensional Assessment of Interoception, spectral analysis of heart rate variability, TAMPA 11 Kinesiophobia, Stanford Brief Activity Survey, Western Ontario and McMaster Universities Osteoarthritis Severity Index, phone app data use. Post: Modified Technology Adoption Questionnaire. Qualitative Post: Exit interviews of app usability/acceptability, and descriptive kinesiophobia experiences for thematic analysis
Assessment of findings/Results: Eligible: 21, Enrolled:10, Intervention ongoing. Data collection in progress.
Conclusions/Implications: Knowledge gained from this study would inform physiologic and behavioral mediation of pain/phobic responses limiting adaptive adjustment to chronic pain in older adults with osteoarthritis. Future research recommendations include randomized control studies utilizing sham or control conditions to distinguish effects of VR, versus paced-breath training and HRVB on pain, pain stress and kinesiophobia in older adults with knee osteoarthritis. Evidenced-based non-pharmacologic methods to address chronic pain are needed. The use of virtual reality and paced-breathing are within nursing’s scope of practice.

Funding: This work was supported by the ASU Graduate & Professional Student Association Jumpstart Grant (ID: 383299).

EDUCATION II

Examining Self-Regulated Learning of Nursing Students in a Clinical Practice

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Purpose: Anxiety and stress of nursing students during clinical practicum affect their learning adaptation and effectiveness. The purpose of this study was to explore the effectiveness of self-regulation learning strategies on the learning adaptation and learning effectiveness among nursing students in their obstetrics and gynecology clinical practicum.

Methods: This study adopted quasi-experimental two-group pre and posttest design with purposeful sampling in two regional hospitals in southern Taiwan. Between October 1, 2019 to March 31, 2010, 60 students who were in obstetrics and gynecology practicum participated in the study. “College Students’ Learning Adaptation, Self-Regulation Learning Strategies, and Learning Outcome Scale” was used to collect data on the first and last day of a four-week practicum. The experimental group included 30 students who were taught group and individual self-regulation learning strategies. The control group, also 30 students, received existing clinical instructions.

Results: Two groups of students had no statistical difference in pretest scores on the learning adaptation, learning strategy, learning outcome subscales, and overall scale score (ps < 0.05). After 4 weeks of practicum, scores of both groups decreased significantly in these subscales and overall. However, at the end of the 4th week, the experimental group had significantly lower scores than control group in these four scores (ps < 0.05).

Conclusion: Although both intervention measures of self-regulation learning strategies and existing clinical instructions were able to help the students in their learning adaptation, learning strategies, and learning outcomes, self-regulation learning strategies were superior to the existing methods in enhancing learning adaptation, more effective in implementing learning strategies, and more likely to improve the learning outcomes of nursing students.

Keywords: self-regulated learning, nursing students, clinical learning

Spreadsheet Solutions: Documentation on a Dime

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Purpose: Students at a small midwestern university only had opportunities to chart during clinical experiences using the hospital's Electronic Health Record (EHR). Instructors quickly review charting and give feedback during clinical but due to the number of students and the amount of time, feedback was limited. Students were unable to access the charts after the hospital clinical experience. Instructors recognized documentation practice as a deficiency in the curriculum. Documentation is an integral part of nursing practice and students need opportunities to practice documentation as well as receive appropriate and thorough feedback.

Rationale: Documentation is one of the most crucial aspects of nursing care, as reflected in the old nursing adage, "If it wasn't charted, it wasn't done". Nursing students need opportunities to practice charting in a multitude of settings. Time and practice are required to improve documentation. Students are able to document in clinical settings but feedback on their documentation can be limited due to time, number of patients, and size of clinical groups.

Methods: Instructors wanted to incorporate charting in clinical, health assessment, and simulation experiences without adding cost for the students. The downside to most commercial electronic health records is the cost for the school and student. Utilizing a free resource, Google Sheets, allows students to chart outside of the clinical setting and allows the instructor adequate time to provide meaningful feedback.

Assessment of Findings: The faculty and students will be surveyed about the implementation of electronic charting outside of charting at the clinical site. This will evaluate whether the addition of electronic charting as an assignment in courses increases student understanding and performance of appropriate documentation. After collecting the data, the researchers will determine where to add the Google Sheet EMR assignments in the nursing program to best facilitate student learning. Further follow up will be completed.

Implications for Practice: Utilizing charting that is accessible to all students can help improve the student's proficiency in charting during clinical and after graduating. Creating and utilizing a simulated charting system in Google Sheets during simulation, lab, and as a classroom assignment will improve charting without adding additional cost to the student or the university. This could also be used for clinicals outside the hospital setting, health assessment, skills lab and simulation.

Increasing Awareness of Advance Care Planning in Undergraduate Nursing Students

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Purpose/Aim: This scholarly project aims to evaluate undergraduate nursing students' comfort with how to initiate and facilitate advance care planning conversations with patients to complete an advanced directive.

Background/Rationale: Advance care planning and advanced directives are essential at any age because when not completed, this often leads to increased healthcare expenditures, prolonged patient suffering, and family decisional burden. Unfortunately, research has identified low completion rates of advanced directives for patients and multiple barriers contributing to a lack of preparation for advance care planning conversations among healthcare professionals. However, suppose clinicians receive education. In that case, research indicates advance care planning conversations and advanced directive completion rates will increase, which translates to improved quality of life and reduced healthcare expenditures. However, barriers still prevent the uptake of these conversations. Therefore, since nurses are a primary source of patient information, they can be influential facilitators in reducing this practice gap; however, only 25% of nursing programs offer end-of-life curricula currently. Furthermore, research indicates that undergraduate nursing students feel unprepared for end-of-life care and advance care planning conversations, which supports the need to implement this quality improvement project. So, education must improve and encourage nurses to engage at their full practice potential since advance care planning is a core nurse competency.

Framework: The Stevens Star Model of Knowledge Transformation is the evidence-based practice model to provide the foundation for this project. The model explains how new knowledge is translated into clinical practice.

Method: The method to implement the project is a quantitative, quasi-experimental quality improvement project without a control group. The participants were recruited through convenience sampling at a nursing program in the Northwestern United States. The inclusion criteria are ages 18 – 65 and active enrollment in the nursing program during the fall term. Exclusion criteria are under 18, inability to understand English, or using computers. The participants will provide informed consent, then receive a validated self-efficacy questionnaire and demographics survey as a pretest. Then they will participate in the two-hour evidence-based advance care planning intervention on November 9th, 2022, and complete the posttest to measure for improvement in self-efficacy in facilitating advance care planning. The evidence-based intervention will include implementing the Serious Illness Conversation Guide to assist students in initiating and facilitating advance care planning conversations. In addition, the students will learn that best practice recommends initiating advance care planning at any age and documenting the patient's preferences as a process that is revisited annually.

Assessment/Implications: The demographic results will be analyzed with descriptive statistics, and the sum of the validated self-efficacy questionnaire results will be analyzed with a paired sample *t*-test. The results and implications will be described at a later date. This is in-progress submission.

EDUCATION II

Mindfulness for Nursing Students: A Pilot Study for BSN Programs

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Purpose: The purpose of this study was to assess the feasibility, student perceptions, and benefits of integrating mindfulness education content into existing course curriculum for two different BSN nursing programs.

Background: Mindfulness training is regarded as a strategy to address burnout, reduce stress, and strengthen resiliency in both nurses and nursing students. Current evidence supports the benefit of mindfulness in nursing schools, yet a national survey found only 9% of nursing schools incorporate formal instruction about resiliency and tools to address burnout. The purpose of this project was to explore if incorporating mindfulness training into the course curriculum of two different BSN programs was feasible and beneficial to students' educational experience and preparation for the workforce.

Methods & Specific Aims: Faculty from the Nursing Departments at California State University Monterey Bay (CSUMB) and San Diego State University (SDSU) integrated a semester-long mindfulness program into their existing BSN curricula. The program included three elements: presentation of formal lectures providing evidence-based research; a semester-long mindfulness journal assignment, and providing mindfulness resources. A total of 130 students participated in the program. A Likert-scale pre/posttest model was used to assess student knowledge and perceptions of mindfulness.

Aim 1: Determine the feasibility of integrating mindfulness content into the existing curriculum of two different BSN nursing programs.

Aim 2: Assess student's perceptions of the importance of and need for mindfulness education in nursing course.

Aim 3: Determine if BSN students perceived the mindfulness education content as beneficial.

To evaluate Aim 1, data on student attendance to lectures, completion of the surveys, and completion of the assignment were analyzed. To evaluate Aims 2 and 3, students were surveyed via Likert-scale questions (e.g.: "I think mindfulness practice is important for helping nurses become more resilient").

Results:

Aim 1: The curriculum content integration showed good feasibility, as evidenced by the following: 100% of students either viewed or attended the mindfulness lectures; 100% of students completed the journal assignment; 76.9% of students completed the post-assignment survey.

Aim 2: The analysis indicated that nursing students perceived a need for mindfulness education and believed it to be beneficial. Further analysis found that nursing students expressed the following: that mindfulness education is important for student nurses (96.7%); that mindfulness practice is important for helping nurses become more resilient (83.5%); that mindfulness content should be taught in nursing school (83.8%); that it is just as important to learn as hard skills (74%); and that there is a need to provide mindfulness curriculum in BSN course curricula (83.7%).

Aim 3: Students perceived that mindfulness education was beneficial. Analysis found that nursing students believed the following about mindfulness education: that it can improve their student experience (87%); that it can improve their ability to learn (85.3); that it can help them manage stress (88%); that it can help them manage anxiety (87.3%); and that it can help them manage their personal and professional relationships (88.3%).

Conclusion: This study provided evidence that the mindfulness education was feasible, beneficial to nursing students, and should be incorporated in curricula.

Mentored Undergraduate Nursing Research: Description of a Process

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Purpose/Aims: The purpose of this presentation is to describe the process and evaluate outcomes of a project involving undergraduate nursing students in mentored research.

Rationale/Background: Best nursing practice evolves from ongoing research. Without new studies, less effective ways of nursing would perpetuate, inhibiting professionals from providing the safest care possible. Mentored research grants students with the opportunity to learn and work in a structured, real-world environment, providing valuable skills for the upcoming generation of nurses. By involving undergraduate students in research, nursing faculty mentor and prepare nurses to make an impact on their field.

Brief Description of the Project: A methodical framework for mentoring undergraduate students in research was developed and implemented. Key elements of the framework for student involvement included (1) vision sharing, (2) just-in-time training, (3) teamwork with individual accountability and (4) technology for collaboration and organization. Vision sharing occurred multiple times throughout the collaboration, including during onboarding. Onboarding included sharing the background, purpose, and methods for the research. Students were presented with possible roles to assist in the research and assessed for strengths and interests. Just-in-time training methods were used to give students enough knowledge to begin the task at hand for a quick start, with additional training given as needed. Other elements of mentoring included teamwork with individual accountability; students took responsibility for specific project areas and reported back and/or taught the team about their progress. Technology played a key role in collaboration and organization.

Outcomes Achieved: During the project, students became more familiar with the research process, became CITI trained, and assisted with IRB proposal submission. They learned specific research and team-based software including EndNote™, eDelphi, Microsoft Teams, and Trello. Students reported an enhanced sense of connection to the professional world of nursing research and developed perspectives beyond the typical nursing curriculum. Faculty appreciated time to get to know students on an individual basis and to build collegial relationships. This research is ongoing. Students will continue to assist with recruitment, data collection, and analysis. Students will have the opportunity to present findings at an institutional conference.

Implications: Involvement in the research process can prepare mentored students to improve nursing care through better interpretation and implementation of nursing research. Communication and collaboration skills may enhance their ability to work with interprofessional nursing teams.

Funding: Brigham Young University College of Nursing

EDUCATION II

Associate Degree Nursing Students’ Satisfaction with a Concurrent Enrollment Program

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Purpose/Aim: The purpose of this project was to evaluate the effectiveness of an innovative Concurrent Enrollment Program (CEP) on student satisfaction and the impact on learning.

Rationale/Background: CEPs offer seamless academic progression from Associate degree (ADN) to Bachelor of Science (BSN) degree in nursing in order to meet workforce demand for more baccalaureate prepared nurses. This is aligned with the call for 80 percent of the nursing workforce to be made up of nurses with BSN or higher in the Future of Nursing Report. As of 2019, the number of BSN students was estimated to be 58.9% in Washington state with an average time of 5.9 years between completion of an ADN and return for a BSN degree. To address this issue, a CEP was developed through a strong partnership between a community college ADN program and a public university RN to BSN program.

Description of the Undertaking/Best Practice: The RE-AIM model guided the development of the CEP. Curricular plans of study leveled and aligned RN-BSN didactic courses with the community college courses so as not to alter either nursing programs’ currently approved curricula. Timing of the university courses to occur during community college summer breaks was a critical aspect of the program development to avoid increasing CEP students’ workload while taking courses at the community college. A descriptive study design, deemed exempt by the university Institutional Review Board, was conducted at the end of the first summer term 2022 for the CEP, using an online Qualtrics survey with Likert scale items and one open-ended question to assess student satisfaction with the CEP courses. The survey was sent to students’ university emails who were enrolled summer 2022 semester of the CEP program (N = 18). Consent to participate was assumed upon initiation of the survey. In addition, a retrospective audit of deidentified aggregated final grades for CEP courses was conducted to assess impact on student learning.

Assessment of Findings/Outcomes Achieved: Six of the 18 students completed the Qualtrics survey (33% response rate). Most students (67%) rated the admission process for the university and the CEP as extremely easy while 33% rated the process as neutral or somewhat difficult. All students (100%) agreed or strongly agreed they felt supported by advisors and strongly agreed they felt supported by course faculty. Most students (83%) strongly agreed and 17% of students somewhat agreed that the timing of opening access to the concurrent enrollment courses did not interfere with their studies for finals week at the community college. All students (100%) reported they felt the pace of the course(s) was manageable and 100% of students would recommend the CEP to their peers at the community college. Audits of final grades demonstrated all student passed their courses with above average grades.

Conclusion: Results from this program evaluation study indicated the CEP should be continued as it facilitates students’ progress toward their BSN and enhances access to upper division undergraduate programs without compromising student satisfaction, learning, or progression in their ADN program.

EDUCATION II

Integrating Self-Care into a Nursing Curriculum

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Purpose: This purpose of this project was to understand students' self-care motivation, activity, and barriers for the purpose of integrating effective self-care interventions into the nursing program curriculum.

Background: The nursing shortage, exacerbated by the pandemic, continues to be an area of concern for the healthcare system and for patient outcomes. Burnout is often cited as a reason nurses leave the profession. Burnout is attributed to multiple contributing factors including staffing ratios, incivility, and workplace violence. Younger nurses have been found to experience higher levels of burnout. Because burnout is such a widespread, multifactorial issue, there will need to be many strategies in place to support nurses and mitigate effects. One strategy to combat burnout is to incorporate self-care concepts and intentional self-care practice into pre-license nursing programs so that nurses will be more likely to participate in self-care activities after graduation.

Description of the Project: A cohort of 80 students entering a pre-licensure Bachelor of Science in Nursing program were given a pre-survey which included the Health-Promoting Lifestyle Profile II scale, open-ended questions about self-care perceptions, and demographic questions. Survey responses were used to develop curriculum interventions to address learning needs, encourage self-care activity, and to promote reflection on future self-care practices as a registered nurse. A total of 64 (80%) students responded to the survey. Overall, they expressed confidence in themselves and were looking forward to their future. They reported having a support network and were able to connect and show concern for others. Students felt motivated to practice self-care because it helps them to manage stress and feel better. Many were likely to engage in regular physical activity but few practiced meditation or relaxation activities. Time and money were identified as barriers for self-care for most respondents (79%). Interestingly, when asked if they had anything else they would like to add to the survey, three respondents expressed issues with anxiety. One had test anxiety, one had generalized anxiety, and the other experienced panic attacks.

Outcomes Achieved: Survey results suggest a narrow definition of self-care with an emphasis on physical activity. Subsequently, the research team developed mini-lectures and activities to introduce a variety of self-care activities. Ten mini-lectures included topics such as healthy cooking for one, mindfulness, financial health, sleep routines, and yoga were incorporated into their fundamentals of nursing course to encourage students to think broadly about self-care. A library space in the nursing building was converted into a quiet reflection space with the adjacent space for creative expression. Finally, a simulation scenario was created for students to consider stress and self-care in the workplace.

Next Steps: Future research includes evaluating this group of students throughout their semesters in the nursing program and after graduation to identify relationships between the purposeful integration of self-care curriculum interventions and self-care activity participation throughout nursing school and as new graduate nurses.

Enhancing Nursing Students’ Perceptions of Older Adults: An Unfolding Case Study

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Purposes/Aims: The purpose of this completed project was to increase nursing students’ understanding of, and stimulate their interest in, elder care among culturally diverse communities in rural and underserved areas in Southern Arizona. Using the Institute for Healthcare Improvement’s 4Ms for Age-Friendly Health Systems as a framework (what matters, medication, mentation, and mobility), University of Arizona College (UA) of Nursing faculty designed and implemented a hybrid virtual/in-person unfolding case study with the aims of: 1) raising awareness of RN roles outside the hospital setting; 2) navigating transitions of care with aging patients and their families, and 3) understanding the complexities of rural health.

Rationale/Background: Deficits in knowledge, skill and competencies in elder care among the nursing workforce have been identified as a nationwide problem. In Arizona, nursing education programs in universities and community colleges generally do not require specific coursework in gerontology. Rather, eldercare concepts are “integrated” into existing coursework, resulting in knowledge deficits about the specialized needs of older adults. Additionally, students’ perceptions of working with older adults are often negatively clouded by early clinical rotations limited to long-term care facilities. Knowing that the case study approach has been demonstrated to increase critical thinking skills and empathy among nursing students, faculty designed a case study to enhance nursing students’ skills and change their perceptions about working with older adults.

Brief Description of the Undertaking/Best Practice: The case study unfolded one part per week over 4 weeks. It comprised one element of a 4-week summer intensive learning experience for a selected group of BSN students with an interest in elder care. The case was situated in a local rural community representative of communities where many UA students were raised. It portrayed an older adult embedded in a multi-generational family from a culture where family roles and relationships loom large and must be addressed by medical staff. Faculty designed the case study utilizing a user-friendly free web-based platform that facilitated a collaborative approach and was easily integrated into the university’s learning management system, thus eliminating the need for specialized instructional designers. Delivery of the case used a hybrid online/in-person flipped classroom approach with a skilled faculty facilitator to help students integrate their applied experiences with the course content and the case. Changes in nursing students’ understanding and perceptions were assessed through written free-text reflection narratives.

Assessment of Findings/Outcomes Achieved: Written student reflections indicated that the students identified with the patient and family members, and the case increased their awareness of the challenges older adults face in healthcare. Several students noted a heightened enthusiasm for working with older adults.

Conclusions: Situating the case in a rural community in southern Arizona that was culturally congruent with many students’ backgrounds, facilitated the achievement of the aims of this project. Unfolding the case over 4 weeks in parallel with student clinical experiences allowed students to immediately apply what they learned. Selecting an easy-to-use electronic platform was crucial in allowing faculty to collaborate and focus on case content rather than the technology.

Funding: Health Resources and Services Administration (HRSA). Project Title: Building Nursing Leadership Capacity in Caring for Diverse Populations of Older Adults: Award # 018549-00001

Enhancing Critical Thinking Skills in Nursing: An Active Learning Approach

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Background: Nurses frequently are confronted with difficult decisions related to clinical practice. Growing health disparities have highlighted the need for nursing educators to prioritize critical thinking (CT) as an essential skill for nursing practice. Student nurses must be prepared to encounter changing and stressful conditions using CT to guide decision-making and the beneficial effects on professional outcomes. Under-represented (UR) individuals in nursing programs are differently advantaged and often face unique challenges and barriers to success. Through enhanced CT skills development, pre-nursing and nursing students can leverage this skill set to meet the demands of an increasingly complex health care environment.

Purpose: To describe a multi-layered, multi-perspective curriculum to develop short-term and long-term CT skills in pre-nursing and nursing students. This curriculum uses unique teaching methods to blend intellectual processes and individual perspectives for critical thinking and apply critical thinking skills to resolve challenges in healthcare.

Approach: A 5 to 8-week multi-layered, stepwise CT curriculum was developed based on the *Transactional Model of Critical Thinking* and a strength-based, growth-minded philosophy. This curriculum was delivered to pre-nursing and nursing students engaged in a summer academic enrichment program for UR students using a leveled approach. Based on academic level, each student was assigned to one of three scaffolded, cohort-specific CT curricula during the summer intensive program. Cognitive skill building was pulse-dosed each week across the summer curriculum. Curriculum content included core problem-solving skills, reflective and creative thinking, and left- and right-brain dominance activities. Students were provided opportunities to move beyond linear problem-solving paradigms toward holistic thinking that incorporates the influence of external social and contextual conditions. All students applied personal and attitudinal attributes, cognitive processes, and environmental conditions to resolving challenges presented in class. In addition, experienced nursing students applied discipline-specific knowledge to strengthen clinical judgment skills to prepare for transition to professional practice.

Outcomes: To date, the CT curriculum was delivered over 5 summer intensive programs to a total of 38 pre-nursing, 33 first year nursing, and 55 second year nursing students. Curriculum evaluation survey results reveal that students feel encouraged and appreciative of the safe, supportive learning environment and openness to diverse problem-solving perspectives. Further, students reported feeling inspired to lead and effect positive change in areas where UR individuals are particularly at risk. All students demonstrated competency in integrated critical thinking and problem solving on their capstone assignments. Nursing students indicated an increased confidence in their ability to apply critical thinking skills to complex clinical situations in simulation and practice settings.

Conclusions: Participants show increased academic engagement, strengthened confidence in thinking and learning processes with respect to cultural identity, and heightened readiness to translate CT into safe practice. This CT curriculum provides a foundation for further curriculum development and integration into pre-nursing and nursing courses to enhance CT skills in complex health care settings. Further exploration is needed to evaluate the impact of the CT curriculum on student demonstration of critical thinking and clinical reasoning across the nursing curriculum and as graduates transition into clinical practice.

EDUCATION II

Foundational Skills before Clinical

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A core tenet of the nursing profession is to provide effective and efficient patient care, focusing on improved safety and quality with positive patient outcomes. Nursing education is paramount in strengthening the dynamic combination of theoretical information and practical application. The theoretical framework was based on the experiential learning theory, which explored the learning styles model of learners. This quasi-experimental study aimed to investigate whether learning foundational nursing skills before entering the hospital impacted anxiety and confidence levels in novice nursing students. The research questions were as follows: is there a relationship between frontloading foundational skills and confidence levels in novice nursing students, and is there a relationship between frontloading foundational skills and anxiety levels in novice nursing students? There were seventy-two participants; 32 participated in learning their foundational skills while caring for patients in a hospital setting, and 40 participants learned foundational skills before caring for patients in the hospital setting. The participants were surveyed using the Nursing Anxiety and Self-Confidence with Clinical Decision Making Scale (NASC-CDM) ©. In addition, independent samples t-tests were performed to determine differences between course timing groups. Findings revealed that novice nursing students are challenged with applying theoretical knowledge to practice, causing them to experience high anxiety and low confidence regardless of when foundational skills were learned. This research noted no statistically significant difference in the timing of learning foundational skills and confidence and anxiety in novice nursing students. The data highlighted overarching implications that nurse educators can use to inform their education of novice nursing students. Moreover, the data revealed that nursing programs could be flexible with the timing of teaching foundational skills based on particular scheduling needs of the students, school and community partners. Increased anxiety and low confidence are notable barriers that impede learning and affect patient safety outcomes. This study was vital in discovering the best learning approaches for minimizing barriers such as low confidence and high anxiety that impact student outcomes and safe nursing practices. Current literature emphasizes that minimizing learning barriers are imperative to increasing the learner’s problem-solving ability, improving their working memory and concentration, and thus their ability to make safe and effective patient care decisions.

Medical RN Perceived Competency in Caring for Veterans with Mental Health Problems

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Purpose: The purpose of this study is to describe the non-psychiatric registered nurses (RN) perception of their competency related to caring for veterans with psychiatric and behavioral health comorbidities while hospitalized with medical problems.

Background: Mental illness affects approximately one in five U.S. adults. Mental conditions such as depression and alcohol use disorders often co-occur with common non-communicable diseases such as diabetes and heart disease. Among the veteran population, those that are hospitalized with serious medical conditions have comorbid mental illnesses or substance abuse disorders. Managing patients admitted to a hospital for medical problems with underlying mental problems may pose a challenge among non-psychiatric RNs. Care delivery challenges for RNs with no or very limited training in the management of psychiatric or behavioral health patients may result in their perception of care processes as stressful, uncomfortable, unsafe, and difficult. Given the high prevalence of comorbid psychiatric conditions among veterans receiving care in the hospital medical units, it is likely that RNs encounter situations requiring particular competencies specific to this patient population. The competencies of non-psychiatric RNs in caring for veterans with psychiatric and behavioral health problems are unknown.

Methods: This is a quantitative descriptive study using an online survey administered to RNs working in the acute care medical units. RNs providing direct patient care were invited to complete the Behavioral Health Care Competency (BHCC) questionnaire, a validated instrument designed to measure medical hospital nurses' perceptions of their individual behavioral healthcare competencies. The BHCC assesses four primary nurse competencies: assessment, intervention, ability to recommend psychotropics, and adequacy of resources. After Institutional Review Board study approval was obtained, participants were recruited that includes an email invitation with a link to Survey Monkey sent via the hospital email distribution list and a study flyer with a QR code link to the survey posted at the nursing unit's huddle board and lounge areas.

Findings: Data collection is in progress; the survey is open for 4 weeks. Data analysis will follow at the conclusion of the survey rollout.

Implications: Findings from this study will be used to guide hospital educators in developing educational interventions to increase non-psychiatric nurses' knowledge, skills, and competencies in caring for this patient population, thus, improving patient care satisfaction and clinical outcomes. For nursing leaders, findings may be used to help identify available and missing resources needed to maximize nursing support.

Meaningful Recognition in an Academic Setting: The Impact of Grace

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Purpose: The GRACE (Gracious Recognition, Appreciation, and Community Excellence) study explores the impact of implementing a meaningful recognition program on compassion fatigue of faculty and staff in a college of nursing setting.

Rationale: Meaningful recognition (MR) is an evidence-based practice that positively impacts the work environment, engages nurses in their work and enhances patient/family experience in the clinical setting. Foundational constructs translated to the academic setting have anecdotally had similar impact on faculty engagement and the student experience in colleges of nursing.

Methods: This longitudinal study collected data before and after implementation of a MR in the University of Arizona College of Nursing (UACON) for Faculty and Staff. The intervention of meaningful recognition of faculty (DAISY Award for academic faculty) and staff (SUNFLOWER award) was initiated in December 2020 and continued annually. An electronic survey was administered to the UACON community via email at baseline (September 2020) and annually for two additional time points (September 2021 and 2022). The survey included demographic data, the Professional Quality of Life Measure (PROQOL) to assess the level of compassion satisfaction, burnout, and secondary traumatic stress, and additional questions to assess perceptions of meaningful recognition and the impact of COVID-19 on burnout. Additionally, open-ended electronic survey questions were utilized to identify themes related to compassion satisfaction and compassion fatigue.

Findings: Baseline measures before the initiation of meaningful recognition (MR) revealed a ProQOL mean score for Compassion Satisfaction (CS) of 41.12 (SD = 5.47), Burnout (BO) mean score of 29.52 (SD = 4.52) and Secondary Trauma Scale (STS) mean score of 24 (SD = 4.73). One year after the MR program began, ProQOL scores indicated a mean score of 37.4 (SD: 5.79) on CS, mean score of 26.92 (SD = 6.18) on BO and mean score of 24.56 (SD = 7.51) on STS. Comparison of ProQOL scores between baseline and one year indicated a significant decrease in compassion satisfaction (t(40)= 3.05, p=.003), a decrease in burnout (t(40)=2.25, p=.027), and no change in secondary trauma (t(40)= -0.425, p=.672). Qualitative themes are congruent with the environmental culture of the college and university at each survey point.

Conclusions and Implications: Results indicate no measurable impact of meaningful recognition intervention, due in part, to multiple confounding variables in the environmental culture. The study was initiated during the intense years of the COVID pandemic which transformed the healthcare education environment, increasing faculty and staff stress levels. Both faculty and staff appeared to have relatively moderate compassion fatigue, relatively low burnout, and secondary trauma. Extending our original research period an additional two years will provide an opportunity to explore the role of MR more fully as one tool to transform the culture of nursing education settings to reflect the essence of caring. Results of this pilot study will be utilized to inform a more robust research project to implement meaningful recognition programs in college of nursing throughout the United States and inform the academic leadership of ways to positively impact resiliency building programs.

Political Astuteness of Nurse Educators

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The purpose of this study was to explore political astuteness levels, comfort and enthusiasm of nurse educators who teach health policy or political advocacy in pre-licensure nursing programs. Nurses comprise the largest segment of the healthcare workforce, but a recent study found that advocating for health policies changes that affect populations on a larger scale has not changed over time. Professional nursing associations, nurse educators, and the Institute of Medicine have all identified the need to educate nurses in advocacy and health policy. With the recent revision of the American Association of Colleges of Nursing's *Essentials* publication, health policy has moved from an Essential to a featured concept found in the domains' competencies and sub-competencies. It is imperative that nurse educators have health policy knowledge to teach the future nursing workforce.

The research questions that guided this study were: 1) What is the level of political astuteness in nurse educators compared to nurse educators who teach health policy or political advocacy content in accredited pre-licensure nursing programs? 2) How do nurse educators compared to nurse educators who teach health policy or political advocacy content in accredited pre-licensure nursing programs rate their levels of comfort and enthusiasm regarding teaching this content? 3) Is there a relationship between nurse educators' political astuteness and their self-reported levels of comfort and enthusiasm? 4) What personal and professional characteristics impact nurse educators' political astuteness, comfort, and enthusiasm? This exploratory descriptive study used a quantitative cross-sectional design to document the political astuteness of nurse educators. An electronic survey containing the Political Astuteness Inventory and demographics questionnaire with questions seeking comfort and enthusiasm levels when teaching health policy content was distributed via network and social media approaches.

The sample consisted of 80 respondents from 32 states. Most participants were from baccalaureate nursing programs in public institutions accredited by CCNE; the majority were employed full time and had earned a doctorate degree, but only 22% were Certified Nurse Educators while 93% were members in at least one professional nursing organization. Although results showed no significant difference in the mean political astuteness score between educators teaching health policy ($M = 25.57$ from 0-40) and educators who have not taught health policy in 24 months ($M = 23.14$), there were statistically significant findings when examining political astuteness means with comfort ($p = .016$) and enthusiasm ($p = <.001$). Statistically significant positive correlations were found between political astuteness and self-reported levels of comfort ($r = .346$, $p = .003$), as well as between political astuteness and enthusiasm ($r = .454$, $p = < .001$). When examining personal and professional characteristics, the accreditation body was found to influence political astuteness, comfort, and enthusiasm.

This study contributes to what we know about the levels of political astuteness in nurses. Implications for nursing education include assigning nurse educators actively engaged in policy and/or advocacy to teach this content, while highlighting the relevance of health policy to practice should happen in every course. Limitations of this study and recommendations for future research are included.

EDUCATION II

Advanced-Level Nursing Students’ Preparedness to Deliver Cross-Cultural Care

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Background: Nursing schools are tasked with teaching patient-centered care strategies in which providers communicate with cultural humility, appreciating each patient’s perspectives, values and health practices. Integrating cross-cultural patient care into advanced-level nursing education is mandated to prepare future providers to better address the needs of patients from a wide range of sociocultural populations. Teaching and evaluation methods related to such patient care differ across nursing programs in the U.S.

Purpose: To investigate graduating NP students’ preparedness to deliver cross-cultural patient care (i.e., care of patients who are members of a culture different from the perceived predominant culture, for example, racial/ethnic minorities, LGBTQI+ populations, persons with disabilities).

Methods: Graduating advanced-level nursing students from Human Resources and Services Administration Advanced Nursing Education Workforce (ANEW) grant-awarded schools of nursing were administered a survey about their educational experiences including their perceived preparedness to deliver cross-cultural patient care. The survey was adapted from previously validated instrument (Park, et al.; Weissman, et al.) that was first piloted at our own College of Nursing and then modified to include current curricular issues. The survey included demographic, Likert scale, and open-ended items. Students indicated their level preparedness to care for 15 types of diverse patient populations by using a scale of very well-prepared, well-prepared, somewhat unprepared, and very unprepared. We also continued the use of our cross-cultural survey project website, the central hub for accessing project information and survey results for participating schools.

Findings: Sixty-eight advanced-level nursing students (DNP, MN/MSN) from five ANEW-awarded schools completed survey. Students reported feeling most prepared to care for patients in general (88%), who are underrepresented racial and ethnic minorities (URM; 93%), or who are persons with disabilities (88%). Students reported feeling least prepared to care for patients who are new immigrants (34%), who are transgender (32%), or who have limited English proficiency (26%). Also, nearly all students reported feeling well-prepared to deliver care using telehealth methods (88%).

Discussion: Despite students’ reporting that they feel well- or very well-prepared to address most populations, students reported a lack of perceived preparation to care for certain populations, most of all for individuals who are immigrants, who are transgender, or with limited English proficiency. This suggests that NP programs may benefit from enhanced curriculum around aspects of healthcare critical to engaging those populations, for example mental healthcare and community healthcare.

Significance: The results of this survey provide a better understanding of advanced-level nursing students’ preparedness to deliver cross-cultural care to patients. Cross-cultural care is increasingly important to integrate into advanced-level nursing education as populations such as racial and ethnic minorities continue to experience growth in the U.S., both as patients and providers. Nursing schools may use this survey to guide curricular development focused on diversity, equity, and inclusion in patient care and future provider preparedness.

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EDUCATION II

Exploring Faculty and Student Perceptions about Disabilities in Nursing Education

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Purpose: The purpose of this study is to explore what types of disabilities impede an applicant's ability to successfully gain admittance to and complete a pre-licensure nursing program from the perceptions of faculty, nursing students, practicing nurses and non-nurse providers.

Background: Historical perceptions of nursing faculty have placed inappropriate limitations on who can successfully gain admittance to, and complete, a nursing program of study. Due to the current practice perceptions, a person with a physical disability (defined as any limitation to unrestricted movement in lifting, turning, walking) would be unable to successfully complete a pre-licensure nursing program. The added stigma which expects new graduates to begin their career only in a medical surgical area puts a physical limitation on where a person with a physical disability can truly begin their nursing career. Faculty perceptions are strongly associated with what type of student could successfully complete a nursing program and how any disability could potentially exclude the person from the application process. Current nursing program and hospital policies likely create a barrier for persons with disabilities to practice bedside nursing.

Methods: Qualitative interviewing will be completed with observations of building accommodations and a review of program documents will be collected and analyzed to determine what, if any, faculty bias exists and how this potential bias might impact those with a physical or medical disability from applying and being accepted to a pre-licensure nursing program. Data points within the survey will include personal experience with disabilities, hospital policies, and nursing program handbook verbiage on disability accommodations. Target populations for survey completion will include current pre-licensure nursing program faculty, nursing program students, and potential applicants with a documented disability. In addition, there will be a research review on the success and difficulties of disabled people in a healthcare related profession.

Anticipated Results: It is expected that survey results will reveal faculty and likely student bias towards admitting a student with a physical or medical disability into a pre-licensure nursing program. It is also anticipated that persons with a disability are not likely to apply to a nursing program due to perceived ability to complete the program and the attitudes of peers towards modified experiences due to the presented disability.

Implications for Translation to Practice: Persons with a physical or medical disability will be able to demonstrate clinical competency with appropriate accommodations in place to perform the duties of a registered nurse. As faculty perceptions change, a more diverse population of students will gain admittance to pre-licensure nursing programs and allow the dissolvement of the perception that all new graduate nurses must begin their career in a medical-surgical unit. Further research should focus on the development of protocols that nursing programs and clinical facilities can follow to accommodate any person wishing to attend a program that has a physical or medical disability.

FORGING AND MAINTAINING RURAL COMMUNITY CONNECTIONS THROUGH THE CONTINUUM OF NURSING EDUCATION, RESEARCH, AND PRACTICE

Overview: Building Rural Community Connections through Nursing Research and Practice

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Purpose: Rural communities have worse health outcomes than their urban counterparts across multiple areas such as physical health, mental health, and substance abuse. The National Institute of Nursing Research (NINR) strategic goals prioritize improving healthcare access for rural populations to address these health disparities. The purpose of this symposium is to discuss how nurse researchers are conducting research and implementing practice change to address the unique barriers to care for rural communities through advancements in nursing education, technology, and innovative interdisciplinary partnerships.

Background: Due to issues such as geographic isolation, lower socioeconomic status, higher rates of health risk behaviors and limited job opportunities, rural residents are more likely to die from heart disease, cancer, respiratory illness, and stroke than their urban counterparts. This disparity was highlighted during the recent COVID pandemic with a higher rate of infection and mortality in rural communities than in urban areas. Complicating this issue is the heterogeneous nature of rural communities, distance to care and provider shortages. To address these structural barriers, the aim of this symposium is to describe five nurse-led initiatives, delivered in collaboration with rural community partners, for improving access to care and health equity.

Methods: Nurse Researchers at Montana State University have focused on addressing the health disparities of the rural communities of Montana--including both ranching, farming, and Native American communities--through interprofessional education, innovative delivery models, technology, and community partnerships. Specific health care needs of focus include: 1) identification of rural Family Nurse Practitioner (FNP) competencies to create a self-assessment inventory for FNP students and practitioners to gauge preparedness for rural practice; 2) Cultural Immersion Service-Learning Experience (CISL) where students, faculty, and the Native American community collaboratively address social determinants of health affecting community health outcomes; 3) improving oral health care for Native American children through the utilization of an interprofessional mobile health team,; and 4) utilization of web camera eye-tracking to permit a wider array of research participation in rural areas given remote rather than in-person study completion, and 5) a collaboration to provide chemotherapy and related services via a “hub and spoke” model centered at a critical access hospital.

Symposium Organization: The variety of the rural healthcare issues addressed by this body of research advances equity for rural communities by removing structural barriers, cultivates diversity in perspective and ideas, and provides increasing opportunity for participation in research. Beyond the immediate research findings and practice implications, this body of work will inform policy development at the local, state, and federal level and contribute to the needed reconceptualization of the United States healthcare system.

Addressing the Impact of Geography on Receipt of Cancer Treatment in Montana

Margaret Hammersla*, BSN, MS, PhD, ANP-BC, Mark and Robyn Jones College of Nursing, Montana State University, Belgrade, MT*

In Montana approximately 5,600 individuals are diagnosed with cancer annually. An estimated 45% of the state's residents live outside of incorporated cities and towns, with 76% of those living in areas classified as rural and frontier. The challenges of cancer patients in rural areas are well-documented. Most rural hospitals do not deliver on-site cancer care services and lack infrastructure, specialty physicians and oncology-trained support personnel (i.e., nurses, advanced practice providers, and pharmacists) to deliver infusion services. Because of this, cancer patients travel long distances to receive treatment. Travel distance is associated with an increased financial burden and worse outcomes with cancer, including later stage at diagnosis, less timely receipt of chemotherapy, and delay or declination of treatment. According to America's Health Rankings, high geographic disparity within the state of Montana remains a significant challenge to overall health. Chronic understaffing of oncologists further exacerbates the geographic barrier to cancer care.

To assess the impact of these combined access barriers to cancer treatment, we utilized 5-year cumulative data (2014-2018) from the Montana tumor registry database to assess the impact of geographic disparity on cancer care for patients in Montana. Overall, 19.2% of Montanans did not receive treatment following a cancer diagnosis. This is similar to the percentage of cancer patients in Delaware that did not receive treatment (19.1%). Although the population of Delaware is similar to Montana, it is 1.3% of the size. While this suggests that distance may not impact the receipt of treatment for cancer, further analysis of treatment data for Montana by county demonstrated broad discrepancies in the receipt of treatment: No treatment ranged from 12.5% to 30.3%. When mapped geographically the counties with the highest percentage of "no treatment" were distant from the 8 Commission on Cancer-approved cancer centers within the state. Distance from Commission on Cancer-approved centers also correlated with traveling out of state to receive care. To further explore the barrier of geography on accessing cancer treatment a survey of cancer patients living in the Mountain West was done via online survey. This survey provides key information on how issues of distance, weather, reliable transportation and care giver support impact accessing cancer care. This analysis provides insight into the impact of geographic barriers on cancer treatment in Montana and identifies remote sites that could benefit from robust outreach and care services to improve cancer care delivery.

To address these barriers to cancer care access, we describe a collaboration to provide chemotherapy and related services via a "hub and spoke" model at a critical access hospital in an underserved rural area to improve cancer related morbidity and mortality.

Web Camera Eye-Tracking Method to Expand Telehealth Delivery Research in Rural Montana

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Purpose: The use of telehealth as a means of providing remote healthcare services has expanded exponentially, with over 52.7 million visits logged in 2020 compared to the 840,000 in 2019. Particularly in Montana, there is a state-wide initiative to continue utilization of telehealth delivery of healthcare services given its ability to be conducted in rural areas and to connect providers (such as nurse practitioners) with patients in varying locations and environments (homes, health centers). While promoted as easy to use and flexible to schedule around provider and patient needs, little standardized training is provided related to telehealth-specific best practices for supporting presence and rapport when in-person verbal and non-verbal cues are altered in a technological milieu. Eye-tracking, considered timeless in human factors and engineering, may be an applied method of peering into the behaviors and perceptions of nurse practitioners while conducting telehealth patient visits to better understand what training measures will benefit delivery of care.

Description of Method: Sticky by Tobii Pro, is a cloud-based platform designed to objectively assess user experience from web camera recordings of eye movements. Key areas of eye movements, known as areas of interest, are tracked while the research participant watches a video or scrolls through a web page. Across a duration of 2 to 3 minutes, researchers can collate eye gaze (focused eye movements) and saccades (quick eye movements) to gain insight as to which areas of interest were visually significant to participants compared to those which were lacking attention. A minimum of thirty participants is recommended with web camera eye-tracking, as the usable amount of data may vary as much as 60% if internet speed is unreliable or there are environmental impediments (dark room, significant facial movement).

Link to Research: Sticky was used in a pilot study of nurse practitioners across Montana delivering mental health-related patient care via telehealth. Fourteen areas of interest (eye contact, facial expressions, body expressions) were pre-populated onto a video of a mock-patient describing the reason for seeking mental health services. Data were collected pertaining to when the areas of interest were initially seen by the nurse practitioner, if the area was visually revisited, the time until the area was noticed (average seconds), and the total duration of time the area was viewed (average seconds). Findings include a higher nurse practitioner awareness to eye contact and less awareness to microexpressions such as brow raising, jaw tension, or gross expressions such as hand gestures. Nurse practitioners gazed longer at patient eyes than any other area of interest.

Conclusion: Use of web camera eye-tracking may permit a wider array of research participation in rural areas given remote rather than in-person study completion. Sticky and other web camera platforms may further translate to pedagogical research and applications, such as nurse practitioner student training and feedback during motivational interviewing. Dark room environments and high rates of facial movement during the eye-tracking portion of the study resulted in unusable data, which requires future attention to establishing in-home environments suitable to this research methodology.

Explicating Family Nurse Practitioner Competencies for Rural Practice

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Background and Purpose: Previous research in FNP practice competency has largely focused on specialty and/or in urban settings. FNPs in specialty and/or urban care work with distinct illnesses or populations, thus defining competencies for the practice is finite. By contrast, FNPs in rural settings must be prepared to provide care to individuals from a wide range of backgrounds, ages, and presenting problems. The purpose of this study was to identify rural FNP competencies as deemed important by practicing rural FNP experts and create a self-assessment inventory for FNP students/practitioners to gauge preparedness for rural practice.

Conceptual Framework: Long and Weinert's Rural Nursing Theory informed and guided the study. Rural FNPs must be educated in a way in which they can be comfortable with a significant amount of uncertainty and possess the ability to be flexible to respond to whatever walks through the door.

Methods: To identify competencies in rural FNP practice, a Delphi method was employed. A total of six FNPs practicing in a rural setting comprised the initial expert panel. From the expert panel responses a list of 77 items were used to create the Rural Family Nurse Practitioner Competency Inventory (RFNPCI) which was then sent to 48 FNPs practicing in rural sites in Montana. Participants were asked to rank the items as to their importance for rural practice using a 5-point Likert scale. Participant and practice site demographic data were also collected.

Assessment Findings: Twenty participants completed the RFNCPI survey with an average age of 47.9 years and 11.3 years of practice. The original RFNPCI of 77 items was pared down to 54 items. The 54 items fell across three practice areas and included: seven Advanced Life Support Items, 11 Emergent/Urgent Items, and 36 Clinic Items.

Conclusions and Implications: We propose presentation of the RFNPCI to graduate nursing faculty and nursing education leaders for consideration of inclusion in current curricula and future modifications in curricula. Additionally, we recommend a comparison of current advanced nursing education competencies and purposeful integration of the RFNPCI into the Essentials of Doctoral Education for Advanced Nursing Practice and Standards of Quality Nurse Practitioner Education. The RFNPCI can provide a starting point for both the design and the evaluation of students as they progress through the curricula specifically designed to train a rural generalist FNP.

Based on findings from this exploration as well as the ever-changing environment of healthcare, periodic evaluation of the inventory will be essential. Changes in technology, economies, politics, and pandemics effect even the most rural locales across the globe. The rural FNP educated in foundations of Rural Nursing Theory and Practice will not only be able to respond to the needs of the rural community but be able to respond in a way that is both evidence based and adaptable at a moment's notice.

FORGING AND MAINTAINING RURAL COMMUNITY CONNECTIONS THROUGH THE CONTINUUM OF NURSING EDUCATION, RESEARCH, AND PRACTICE

Improving Childhood Caries through Mobile Interprofessional Outreach

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Purpose: To determine the effectiveness of an interprofessional mobile health team on access to oral health care for children attending American Indian Head Start classrooms who have disparate rates of early childhood caries.

Background: Tooth decay is the most common chronic disease in children and a major public health concern as oral health is important to lifelong overall health. American Indian children suffer disproportionately from tooth decay and are a priority group for outreach and intervention.

Methods: Our team of nurse practitioners, nursing students, and dental hygienists visited Head Start classrooms on an American Indian reservation in Montana from 2018 to 2022. We provided oral health assessments, application of fluoride varnish, placement of dental sealants, and referrals as needed to 476 children. We quantified participation rates in the supplemental oral health program, treatments provided, and time from referral to dental care.

Results: Student enrollment surpassed 85% in all four years of the project. Case management reduced the time from referral to dental treatment from a median of 166 days in the first year to 58.3 days in year four. The surveillance captured a spike in untreated caries associated with classroom closures and suspension of classroom toothbrushing during the Covid-19 pandemic.

Implications: Tooth decay is the most common chronic infection of childhood. Public health and primary care nurses have a growing role in offering oral health education, referral, preventive treatments and case-management to their affected clients. Study findings suggest the mobile interprofessional team is an effective way to improve access to oral health care for American Indian Head Start children.

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Improving Healthcare Access for Native American Children with Student Nurses

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Purpose: The National Institute of Nursing Research (NINR) strategic goals prioritize improving healthcare access for rural populations. Montana is home to seven rural Native American (NA) reservation communities. Long winters, unpaved roads, poor infrastructure, and poverty are some challenges that restrict access to health care for NAs in these communities. These geographic challenges are compounded by transcultural challenges stemming from differences in world view between NAs and health service providers. To respond to the unique health needs of rural NAs, nurses in rural areas must be equipped to meet geographic and transcultural challenges. The purpose of this study is to describe the role student nurses can play in filling the gaps needed to provide fundamental health promotion and disease prevention to rural NA communities and to describe the impact of the experience on students' understanding of transcultural nursing.

Description of the Methods: Since 2011, student nurses have participated in a week-long Cultural Immersion Service-Learning Experience (CISL) where students, faculty, and the NA community collaboratively address social determinants of health affecting community health outcomes. Students learn about NA health beliefs and culture from elders including the impact of historical trauma on health outcomes while assisting local healthcare providers to deliver health education, perform preventative health screenings, complete individualized healthcare plans for children with acute and chronic health conditions, and carry out wellness visits with referrals for specialized care. Providing necessary services to an underserved community helps to alleviate the strain experienced by the under resourced local healthcare team bolstering capacity to provide early and preventative routine healthcare to all school aged children. Reciprocally, student nurses learn about the health beliefs of a cultural group different from their own and experience firsthand how social determinants of health directly impact health outcomes for vulnerable populations including rural NA communities. To assess the impact of this experience on student learning, 8 individual interviews and an artifact analysis were conducted with students during the CISL experience.

Link to the Research: Maternal and Child Health Data (2022) reported a 10.6% gap in NA children's health compared to that of white children. Of concern are higher rates of emotional disorders including anxiety, depression, and other behavior problems among NA children ages 3-17 years compared to their White peers (16% vs. 11%, respectively). Further, children residing in rural communities experience higher rates of depression, anxiety and behavior problems that impact lifelong health and wellbeing compounding risk for NA children in rural communities.

Conclusion: Results from this study demonstrate to others the usefulness of the process of including student nurses in the delivery of culturally responsive care in other rural settings. Providing these unique opportunities for students has positive and lasting impacts on student nurses understanding of the pressing health challenges of rural NAs while providing an opportunity for student nurses to participate in an innovative program which impacts individual and community health. Overcoming geographic barriers alone cannot completely close the health equity gap. CISL successfully bridges the cultural divides between student nurses and NA communities.

Advance Care Planning: Improving Patient Self-Efficacy and Readiness

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Background: In the United States, a majority of older adults have not engaged in Advance Care Planning (ACP). Lack of ACP documentation may lead to unwanted medical interventions, hospital stays, and rising health care costs. In 2022, ACP was named as a new Healthcare Effectiveness Data and Information Set (HEDIS) metric. At a local health organization, primary care providers are now required to address and document ACP annually for qualifying patients. Although submission of ACP diagnostic codes will fulfill the quality metric, it does not necessarily address patient education, readiness, self-efficacy, or advance directive documentation. Research supports the utilization of the PREPARE © program and ACP group visits to increase patient self-efficacy, readiness, and ACP documentation.

Purposes/Aims: The aim of this project is to improve patient readiness and self-efficacy regarding ACP and to improve advance directive documentation. At an internal medicine clinic, qualifying patients will be provided education utilizing PREPARE © documents, including an Advance Directive, and referral to an ACP group visit.

Framework/EBP Model: This project will utilize the Iowa Model of Evidence-based Practice to pilot an evidence-based practice change by a Nurse Practitioner student at an internal medicine clinic.

Methods: This project will use a validated 9-question Likert-scale survey to assess pre and post intervention scores of self-efficacy and readiness among patients. Chart reviews will be conducted to assess advance directive completion at the conclusion of the project.

Intervention: Patients at an internal medicine clinic will be identified as in need of ACP based on an indicator in their electronic medical record. The nurse practitioner student will assess their willingness to participate in the pilot project and if amenable, patients will be given a pre-survey. Patients will be educated utilizing PREPARE © documents and will be referred to an ACP group visit. Patients will attend an ACP group visit with their peers and a geriatrician to discuss ACP. Two months after the initial encounter, participants will be contacted, and a post-survey will be administered.

Evaluation of Results: Results of the pre and post survey will be evaluated to detect any differences in the survey scores regarding ACP readiness and self-efficacy. Comprehensive chart reviews will be completed to determine if advance directive completion was improved.

Implications for Clinical Practice: The intervention, if successful and adopted within the internal medicine department, would require providers to enter a referral and briefly discuss PREPARE© documents. This practice would not require additional time from the provider compared to the current standard of practice of entering a diagnostic code for ACP discussions. Additionally, the duration of the ACP group meeting is 90 minutes. This time allows the patient to have in-depth ACP discussions with a geriatrician and their peers; a timeframe that is not feasible in a primary care setting.

Conclusions: If successful, future pilot projects could implement this intervention on a larger scale within the health care organization to determine if this process should be implemented as a standard of practice throughout the enterprise.

Correlates of Physical and Mental Health in Family Caregivers of Persons with Dementia

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Purposes/Aims: The objectives of our study were to (1) explore characteristics of perceived health among family caregivers (FCG) of persons with dementia (PWD) and (2) examine factors associated with FCGs' physical and mental health.

Background: As the aging population grows worldwide, the increasing number of PWD creates an extensive care burden for FCGs. Caregiving for PWD is particularly demanding because the need for care increases with the disease's progression. FCGs of PWD, in particular those living with their care recipient, experience more physical and mental symptoms (e.g., stress, depression) than non-dementia FCGs. This may lead to reduced well-being and increased healthcare costs. However, research on factors associated with FCGs' perceived health is lacking.

Methods: This cross-sectional study used existing baseline data for a music-based intervention for PWD and their FCGs. Thirty-eight Swedish dementia dyads (38 FCGs and 38 PWD) were included in the study. Perceived health was divided into physical and mental health (stress and depressive symptoms). Perceived physical health was assessed using one item with a 5-point Likert scale derived from the Swedish version of the 36-item Short-Form Health Survey Questionnaire (SF-36). Stress and depression symptoms were measured with the Swedish versions of the Perceived Stress Scale-14 (PSS-14) and Patient Health Questionnaire-9 (PHQ-9), respectively. Factors potentially associated with FCGs' perceived health were (1) PWD-related cognitive function, activities of daily living, and neuropsychiatric symptoms and (2) FCG-related frequency of caregiving demands, relationship with PWD, and frequency of support from healthcare and social services. Multivariable linear regressions were performed to examine the factors associated with FCGs' perceived physical and mental health.

Assessment of Findings/Outcomes Achieved: The 38 FCGs' mean age was 75 years (SD=10), 63% (n=24) were female, and the majority (n=37, 97%) were spouses or partners. Among the 38 PWD, 63% (n=24) were male, and over half (n=21, 55%) showed moderately severe to very severe cognitive decline. Most FCGs (n=27, 71%) reported good or very good physical health. FCGs' perceived relationship with PWD was significantly associated with FCGs' general physical health. Specifically, FCGs who responded that they always or almost always had a good relationship with PWD were more likely to have better perceived physical health than those who responded with often or sometimes (β=-.399, p=.046).

Conclusions/Implications: Interconnectedness and mutuality with PWD may play an important role in FCGs' health outcomes. Findings from this study suggest that nurses and other healthcare providers should take the quality of FCG-PWD relationships into account. Future studies should comprehensively assess the characteristics of such relationships and how they are linked to FCGs' health outcomes.

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Perceived Balance and Accidental Falls in Community Dwelling Older Adults

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Purpose: The aim of this in-progress study is to examine the extent to which older adults' perceptions about their own balance ability, health status, memory, and fear of falling is associated with falls in the last month in a nationally representative sample of community dwelling older adults.

Background: Accidental falls are a significant health threat among older adults. Approximately 30% of adults age 65 and older suffer one or more falls each year, and falls are the leading cause of injury and injury death among this population. Most accidental falls are preventable, and preventable interventions include balance and strength training, home environment safety, and vision and hearing assessments and treatments. Thus, older adults' individual engagement in fall prevention is imperative. It is well established that health beliefs guide preventable health behavior. However, older adults' perceptions regarding their own fall risk and fall prevention has received less attention in research and practice. Limited nursing research suggest that older adults do not use the term "fall risk" to describe their risk for falls. Instead, older adults commonly use the term "balance problems." Further exploring older adults' perceived balance problems in relation to accidental falls is needed to bridge this important research gap. The Health Belief Model (HBM) was selected as the theoretical framework for this study. The model posits that individuals desire to avoid illness and that health actions will prevent health threats. The concept of perceived susceptibility refers to an individual's acceptance of personal susceptibility to a health threat, such as accidental falls.

Methods: This study is a cross-sectional secondary analysis using the National Health and Aging Trends Study (NHATS) survey data from year 2015 (N=8,334). A subsample of participants has been selected for this study, based on the inclusion criteria of older adults who are living independently in the community and able to respond to the surveys on their own. The dependent variable is self-reported falls in the last month. The independent variables focused on perceived susceptibility include perceived balance problems, fear of falling, perceived memory problems, and perceived health status. The sociodemographic variables included in the model are age, gender, race, ethnicity, education level, and metropolitan/non-metropolitan living area. Independent health factor variables include number of diseases, vision, pain, use of mobility devices, recent hospital stay, depression, and anxiety. Multiple logistic regression analysis is being conducted to explore the cross-sectional associations between the variables.

Assessment of Findings: We hypothesize that there is a positive relationship between fear of falling and falls in the last month and perceived balance problems and falls in the last month. We hypothesize that there are associations between falls in the last month and the socio-demographic, health factors variables, perceived health status and perceived memory problems.

Conclusion: The findings from this study will inform future research focused on health beliefs of older adults regarding accidental falls. This may guide the development of interventions supporting older adults in fall prevention. These interventions may decrease fall rates among older adults and improve health outcomes among this vulnerable population.

SDoH in LGBTQ+ Older Adults: Impact of Socioeconomic Disadvantage on Hospitalizations

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Purpose: This study focuses on lesbian, gay, bisexual, transgender, queer, and other (LGBTQ+) older adults (≥50 years) with hospitalizations in a large health system in North Carolina to determine whether the distribution of the hospitalizations among this clinical population are related to structural socioeconomic factors, specifically the average area deprivation index (ADI) for the county in which the patient resides. We hypothesized that counties with a higher average ADI will have a significantly higher proportion of the LGBTQ+ hospitalizations.

Background: LGBTQ+ individuals remain a largely invisible and marginalized population. Structural social determinants of health such as racism, gender identity, socioeconomic status, education level, employment, housing quality, and environment can lead to health inequities. Residential neighborhood, a social area-level determinant of health, has been shown to be an important predictor of health outcomes. Residing in a socially disadvantaged neighborhood is related to an increased heart failure risk, hospitalizations, and symptom burden for Black men. Further, residing in a socioeconomic disadvantage area is associated with a greater likelihood of emergency general surgeries, mortality, and hospital readmissions. Little is known about the impact area-level socioeconomic disadvantage on LGBTQ+ hospitalizations in older adults.

Methods: This descriptive study was a secondary analysis of retrospective electronic health record data for 1372 LGBTQ+ older adults hospitalized in a large health system in North Carolina from November 2018 to August 2022. Among the 1372 patients, a total of N=2496 hospitalization due to some patients having more than one hospital admission during the period. Patient demographics, clinical characteristics, and primary residential county were extracted for each LGBTQ+ hospitalization. Area-level socioeconomic disadvantage was measured using the average ADI of the county in which the patient resides, with higher ADI indicating greater socioeconomic disadvantage. Descriptive statistics were used to detail patient characteristics at each hospitalization and chi-square goodness of fit test was used to evaluate differences in the proportion of LGBTQ+ hospitalizations among those who reside in low, moderate, and high socioeconomic disadvantage residential areas.

Assessment of Findings: Of 1372 LGBTQ+ older adults, we assessed their characteristics at their first hospitalization. The mean age was 66.9 years (SD=9.8, range: 50-103). Most identified as male (54%), followed by female (46%), gender fluid (0.3%), transgender (0.2%), and non-binary (0.2%). Patients reported their sexual orientation as asexual (60%), lesbian or gay (27%), bisexual (11%), queer (0.6%), and pansexual (0.5%). The majority were Caucasian/White (82%) and married/partnered (60%). The analysis in progress will focus on further characterizing patient characteristics at each hospitalization and completing ADI coding to test for differences in the distribution of hospitalization between different levels of ADI.

Conclusions: A greater understanding of the socioeconomic disadvantage of the LGBTQ+ older adult population and its impact on access of health care can help identify community resource needs, health programs, and policy recommendations to reduce health inequities for LGBTQ+ older adults.

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Socioecological Changes Impact Health Outcomes in Nursing Homes: A Scoping Review

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Purpose: To conduct a scoping review of the literature to answer the research question: How did the socioecological changes resulting from the COVID-19 pandemic impact physical, psychological, and social health outcomes of nursing home residents? This scoping review was guided by the Socioecological Model, specifically examining the socioecological changes that occurred at the individual, interpersonal, community, and structural levels.

Background: Nursing homes have implemented major changes to protect residents from COVID-19. Restructuring included social distancing measures, heightened restrictions on visitation and activities, and limitations on the delivery of care. These changes have altered the care, support, and socialization within the nursing home, affecting the social determinants of health for residents. Even though the pandemic is waning, many nursing homes have not resumed pre-pandemic states for visitation, activities, and care. Consequently, the relationships between the social determinants of health and health outcomes for residents of nursing homes continue to be affected by the COVID-19 pandemic.

Methods: The scoping review was guided by the Arksey and O'Malley (2005) methodology. The databases used were PubMed and CINAHL. Search terms consisted of key words defining COVID-19, nursing homes, and the social determinants of health. Inclusion criteria were articles of all types, written in English, published on nursing homes worldwide, and articles that provided an examination on an aspect of health within a layer of the Socioecological Model among residents of nursing homes. A total of 332 articles were identified, of which 13 were duplicate, 271 were screened irrelevant during the title and abstract screening phase, and 25 were excluded during the full-text phase. Data from the 23 included studies were extracted across the layers of the Socioecological Model and by physical, psychological, and social health outcomes.

Assessment of Findings: Data analysis is ongoing and will be presented across the layers of the Socioecological Model. Preliminary findings suggest factors affecting resident health at the individual level include living with comorbidities and age; interpersonal factors include family involvement in care and visitation; community factors include size of the nursing home and for-profit ownership; and a societal factor included stigma. Health outcomes explored include COVID-19 infection, depression, and quality of life. After summarizing the results, nursing home administrators will be consulted to validate findings and discuss nursing solutions.

Conclusions: Residents of nursing homes have been disproportionately impacted by COVID-19; and, as opposed to other social settings, nursing home are continuing to be impacted by COVID-19. By understanding how the pandemic changed the social determinants of health and the effect on physical, mental, and social health outcomes, nursing home staff can begin to address underlying causes to poor health for residents of nursing homes.

The Challenges and Rewards of Caregiving for Persons with Cognitive Impairment

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Aim: The aim of this study was to explore the challenges and rewards that caregivers of persons with cognitive impairment experience throughout the caregiving process.

Background: Annually, more than sixteen million caregivers in the United States provide unpaid care for their family or friends with cognitive impairment including dementia. Of which, 80% of those care recipients receive care in their homes. Caregiver role and other responsibilities (e.g., job, caring for other family) often cause emotional stress and burden among caregivers. Unresolved caregiving challenges can impact multiple areas of the caregiver’s personal life, health, and overall well-being, as well as the quality of the care that they provide for the care recipients. Greater understanding of the challenges and rewards encountered by caregivers is critical to guide and develop programs and resources to support caregivers.

Methods: This was a secondary analysis of descriptive qualitative data. We analyzed interview data of 30 caregivers who participated in one of two clinical trial studies that tested effects of a behavioral sleep intervention program for persons with cognitive impairment and their caregivers with poor sleep. As part of the multicomponent intervention program, trained sleep educators asked caregivers open-ended questions of challenging and rewarding experiences as a caregiver. All interviews were conducted either in-person or via video telehealth and audio recorded. Two members of the research team independently coded interview transcript to identify underlying themes.

Results: Twenty-eight individuals were providing care for family members with dementia. Eighty-seven percent of caregivers were women, and most had a marital or adult child relationship with the care recipients (mother 47%, husband 40%, father 7%, wife 3%, grandmother 3%). Four themes were identified in the challenges of caregiving domain: emotional, financial and physical challenges, and relationship conflicts. Changes in the caregiver role, concerns about falling of the care recipients, and coping with dementia-related problematic behaviors were the main subthemes of emotional challenges. Caregivers also stated physical demands due to the need to assist the care recipient on activities of daily living (e.g., changing a wet bedsheet at night) and caregiver themselves’ physical health issues. Some caregivers noted lack of family support and relationship conflicts with other family members. Adult child caregivers also addressed lack of available respite care for their personal times and challenges of searching for culturally matching paid caregiver service. Feeling appreciated, accomplishment, seeing happiness in the care recipient, and support were the main themes identified in the rewards of caregiving domain. Subthemes of rewards included support by community, family, friends, and relationship with the care recipient and other family members.

Implications and Conclusion: These initial findings point to the urgent need to comprehend further the impact of caregivers’ challenges and any mediating effects of rewards experienced by caregivers as they navigate through changes in caregiving, such as the disease progression of persons with dementia. Future research should identify coping strategies feasible to different groups of caregivers, such as spousal and adult child caregivers, and those caring for their loved one with different cultural background.

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GERONTOLOGY

Upper Arm Weakness: A Risk for Non-Cardiovascular Mortality Among Octogenarians

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Background: Sarcopenia is common in older adults and is associated with impaired activities of daily living, disability and mortality. Aging-associated upper extremity weakness is a predictor for cardiovascular mortality in older adults.

Purpose: We examined the association of upper extremity weakness with non-cardiovascular mortality.

Methods: Of the 5759 community-dwelling older Americans aged 65-100 years in the Cardiovascular Health Study (CHS), 1552 (26.9%) had upper extremity weakness, defined as self-reported difficulty with reaching, gripping, or lifting. Using propensity scores for upper extremity weakness, estimated for each of the 5759 participants, we assembled a matched cohort of 2388 participants balanced on 60 baseline characteristics including geriatric and functional variables such as physical and cognitive function. Hazard ratios (HRs) and 95% confidence intervals (CIs) for all-cause and cause-specific mortalities associated with upper extremity weakness were estimated in the matched cohort.

Results: Matched participants had a mean age of 73 years, 73% were women, and 17% African American. During 23 years of follow-up, all-cause mortality occurred in 84.2% (1005/1194) and 81.9% (978/1194) of matched participants with and without upper extremity weakness, respectively (HR, 1.10; 95% CI, 1.01–1.20; p=0.037). Upper extremity weakness was associated with a higher risk of non-cardiovascular mortality, occurring in 627 (52.5%) and 592 (49.6%) of participants, respectively (HR, 1.14; 95% CI, 1.02–1.27; p=0.025), but had no association with cardiovascular mortality (32.3% vs. 31.6% in those with and without upper extremity weakness, respectively; HR, 1.04; 95% CI, 0.90–1.19; p=0.624).

Conclusion: Among community-dwelling older adults, upper extremity weakness had a weak, albeit independent and significant, association with all-cause mortality, which was primarily driven by a higher risk of non-cardiovascular mortality. Future studies need to develop and test interventions to address the modifiable risk factors for upper extremity weakness so that health and mortality outcomes of older Americans can be improved.

ADRD Risk: Social Isolation and Immigration-Related Factors

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Alzheimer's disease and related dementias (ADRD) is a growing public health crisis. Evidence that social isolation is associated with an escalated risk of ADRD makes it a modifiable risk factor critical to address in high-risk populations. Literature suggests individual, social, and environmental factors are associated with social isolation; however, little research has examined the role of immigration-related factors on social isolation. This study aimed to examine correlates and predictors of subjective social isolation among older adults in California.
This is a secondary data analysis of the California Health Interview Survey (CHIS) 2019-2020 among adults over the age of 65 (N=8,447). The dependent variable was a measure for subjective social isolation using the UCLA 3-item loneliness scale with groups categorized into "lonely" (4-Item Loneliness score= 5 and above) and "not lonely" (4-Item Loneliness score= less than 5). Our covariates include race and ethnicity, age groups, level of education, poverty level, sex (biological), marital status, employment status, rural status, perceived health status, and household size (1, 2, 3-4, 5+). Immigration-related variables include immigration status (foreign-born, US-born), English-language proficiency, and citizenship status (US-born citizen, naturalized citizen, non-citizen). We performed a binary logistic regression analysis and multivariate logistic regression.

Among the total sample, approximately 32% were immigrants and 49% were female. The sample includes Hispanic (18.2%), Non-Hispanic White (NHW) (63.5%), African American/Black (3.8%), Asian (11%), and all other (3%) adults. Around 36% had less than high school education, 91% had health insurance, 36% were unemployed, and about 31% live less than 200% Federal Poverty Level. Approximately 13% of adults over the age of 65 experience severe loneliness. The results of the binary logistic regression showed in the crude model that females, being unmarried, or those who had below high school level of education, poor mental health status, foreign-born status, limited English language proficiency, naturalized citizens, and living below 200% poverty level had higher odds of severe loneliness than comparative groups (p<.05). Based on the multivariate logistic regression analysis, identifying as African American [OR=.52, 95% CI=.35, .77], age group of 75-84 years [OR=.65, 95%, CI=.55, .76], living at a poverty level below 200% [OR=1.25, 95% CI=1.06, 1.47], unmarried [OR=2.65, 95% CI=1.67, 2.53], fair or poor health [OR=3.85, 95% CI=3.23, 4.59], living in a two person household [OR=.59, 95% CI=.48, .72], and living with over 5 people [OR=.50, 95%, CI=.32, .82] remained significant in the adjusted final model (p<.05).

As the US population continues to age and become increasingly diverse, nursing research should focus on the needs understudied older adult immigrant populations. This study shows the importance of examining factors to social isolation among older adults by immigration status. Further research exploring the underlying mechanisms that promote social connectedness or social isolation among older adult immigrants is warranted.

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Pressure Injury Risk Factors in Surgical Hip Fracture Patients

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Purpose: The purpose of this study was to identify factors associated with risk for new hospital-acquired pressure injury (HAPI) formation in surgical patients with a hip fracture.
Background: Pressure injuries are damage to the skin or underlying tissue caused by pressure or pressure in combination with shear. Pressure injuries occur among 6-15% of surgical patients with a hip fracture. Development of HAPI results in longer duration of hospitalization, reduced functional outcomes after surgery, and increased costs. Among hip fracture patients, older individuals are at increased risk for HAPI formation and are particularly vulnerable to the harmful effects of HAPI on functional recovery after a hip fracture. However, although hip fractures result in altered mobility and therefore increased risk for HAPI, little is known about specific HAPI risk factors in patients who experience a hip fracture.
Methods: This study was a descriptive, correlational study. We retrieved the 2019 American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) data file and merged the file with the ACS-NSQIP 2019 Hip Fracture Targeted Procedure file. The sample included older adult patients (>=65) with a hip fracture who had a surgical procedure in 2019. The outcome measure was HAPI formation identified in the file. Independent variables included sociodemographic characteristics, preoperative health conditions and functional abilities, preoperative laboratory values, and perioperative factors. We conducted both descriptive and regression analyses. We utilized bivariate analysis with Pearson Chi-square tests to assess any significant association between the occurrence of HAPI formation and independent variables. We then conducted multiple logistic regression analyses to identify independent risk factors for HAPI formation.
Results: The final sample included 9,190 patients, and 628 (6.83%) patients developed at least one HAPI. Among sociodemographic characteristics, age greater than 70 or BMI less than 19 were significant risk factors (OR = 1.482, $p = 0.011$; OR = 1.35, $p = 0.045$, respectively). Having a weight loss more than 10 lbs within 6 months prior to the surgery or using a mobility aid preoperatively placed patients at increased risk for HAPI formation (OR = 2.844, $p < 0.001$; OR = 1.858, $p < 0.001$, respectively). Diabetic patients who were insulin dependent were 76.2% more likely to develop HAPI (OR = 1.762, $p < 0.001$). Patients with preoperative BUN level greater than 25 were 67.3% more likely to have HAPI formation (OR = 1.673, $p < 0.001$).
Implications: In this study, we identified risk factors associated with new HAPI formation in older adult hip fracture patients. The 2019 National Pressure Injury Advisory Panel (NPIAP) guidelines recommend that nurses identify pressure injury risk factors as part of routine care planning. By identifying significant risk factors, nurses may develop and implement HAPI prevention strategies to promote better patient outcomes. Nutrition promotion needs to be emphasized in postoperative hip fracture patients with low BMI or weight loss given their increased risk for HAPI formation.

Nursing Intervention Impact on Length of Stay in Patients with Postoperative Delirium

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Aims/Background: Delirium is a serious problem among hospitalized patients, especially older adult surgical patients. Delirium affects about 7 million hospitalized patients including more than one-third of postoperative patients. Delirium has an adverse impact on patients, families, and healthcare organizations. Patients with postoperative delirium are at increased risk for higher mortality rates, increased length of hospital stays, and non-home discharge dispositions. The annual costs related to delirium range between $4 to $6 billion in the United States. Nurses play an important role in postoperative delirium screening and management. While research shows that nursing interventions are effective in reducing the incidence, duration, and severity of postoperative delirium, there is a significant lack of literature on the impact of nursing interventions on the length of stay (LOS) in patients with postoperative delirium. The aims of this study were to a) explore patient characteristics and perioperative factors associated with prolonged LOS, and b) identify the impact of current nursing delirium interventions on LOS.

Methods: This was a retrospective pilot chart review study. We extracted Electrical health records (EHR) of adult patients admitted between January 2019 and December 2020 to the medical-surgical units in five networked hospitals in the Mountain West. We randomly selected 75 older adult (>= 65) surgical patients screened positive for delirium (via the Confusion Assessment Method) for at least 24 consecutive hours during the hospitalization. The outcome was the hospital LOS with 4 categories (0-3 days, 4-6 days, 7-10 days, >10days). Independent variables included sociodemographic characteristics, laboratory values, perioperative factors, and nursing interventions. We conducted bivariate chi-square tests to test the relationships between each independent variable and the outcome variable. We used multinomial logistic regression analyses to identify factors associated with prolonged LOS.

Results: Among the 75 patients, more than half had a prolonged LOS (>10 days, 32%; 7-10 days, 28%; 4-6 days, 28%; 0-3 days, 12%). Patients had general anesthesia were more likely to have prolonged LOS compared to those with other types of anesthesia (RRR = 10.92, $p = 0.037$; RRR = 26.58, $p = 0.015$, respectively for LOS >10 days, and LOS 7-10 days). Among nursing interventions (early indwelling urinary catheter removal, early mobilization, pain management, sleep promotion, and family visits), early urinary catheter removal was the only significant factor. Patients with delayed urinary catheter removal were at increased risk for prolonged LOS compared to those with early urinary catheter removal (RRR = 25.01, $p = 0.018$ for LOS >10 days).

Implications: The study findings have important implications for nursing practice and research. Many hospitals have implemented nurse-driven urinary catheter removal protocol to prevent catheter-associated urinary tract infection (CAUTI). To prevent CAUTI and prolonged LOS, nurses should assess the medical necessity of indwelling urinary catheters and promote prompt removal when urinary catheters are no longer indicated. For patients with general anesthesia, nurses should utilize evidence-based practice in delirium screening and management. For future research, studies with large sample sizes are needed to further examine the impact of nursing interventions on LOS in patients developed postoperative delirium.

Improving Menstrual Health Outcomes for Refugees Using Poplar Training

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Purpose: The purpose of this quality improvement (QI) project is to provide evidence-based interventions to reduce period poverty via a culturally sensitive, gender-affirming menstrual health education program at a refugee community organization in the Pacific Northwest. The goal is to reduce poor menstrual health-related outcomes in the multi-racial population served by increasing the knowledge of the organization's refugee workers about culturally sensitive menstrual hygiene care, menstrual cup use, and recognition of the indications for gynecological referral.

Background: Period poverty affects millions worldwide resulting in poor health outcomes such as bacterial vaginosis, urinary tract infections, vaginal candidiasis, and toxic shock syndrome. Period poverty creates barriers to accessing affordable menstruation supplies and safe hygiene facilities, plus numerous difficulties and cultural taboos surrounding menstruation among immigrant populations often resulting in missed days at school. Furthermore, the strong correlation between poor menstrual health among immigrants and refugees reveals a need for gynecological referral for those with high rates of dysmenorrhea, endometriosis, and infection.

Description: The project team of staff, agency mentors and university faculty was led by the DNP student. Menstrual health education training was implemented in-person by the DNP student in a series of three 90-minute sessions utilizing the Plan-Do-Study-Assess (PDSA) framework with theoretical support provided by Orem's Theory of Self-Care. The trainings were provided to 18-20 refugee staff workers on October 3rd, 5th, 7th of 2022. The project was implemented using the technique poplar education as each session included introduction, lesson training, case study and interactive learning game. Clinically the staff educators were taught to use 1) culturally sensitive responses to questions regarding the Menstrual Dignity Act, 2) gender affirming language, and 3)use of the menstrual cup. The trainings were designed in low level health literacy to achieve integration of learning as well as address staff language barriers. Reference information including handouts with detailed menstrual cup instructions were provided.

Assessment of Findings: This project is currently in progress and will be completed by March 2023. At this stage, the attendees are anonymously surveyed using DNP-student developed, pre- and post-education questionnaires assessing knowledge improvement and training satisfaction with all results aggregated in a secure university platform. Data analysis using standard descriptive statistics will occur at the conclusion of each of two PDSA cycles. Final results are not yet available. Preliminary post-training cycle-1 results: staff reported increased knowledge levels, increased comfort and confidence when having to do teaching regarding menstrual cup use, and increased confidence to teach families about menstrual health.

Conclusions: Previous evidence shows that the addition of menstrual health trainings with interactive poplar education increased staff knowledge and comfort with assessing the need for a gynecological referral and improved menstrual health outcomes. Therefore, this project's purpose to increase staff culturally sensitive knowledge of menstrual-hygiene care and menstrual cup use is projected to lead to improvement in menstrual health outcomes for these refugee populations. Sustainability of the project may consist of facilitating buy-in for a staff leader to provide training to all staff or creating recorded lectures of education with staff assisted technology.

Implementing Social Needs Screening in Primary Care Using an Automated Referral

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Background: Social needs are widespread and can significantly affect health. While primary care provides an optimal setting for identifying and responding to social needs, these needs often go unnoticed and unresolved for many reasons. Even when screening for social needs is recommended in primary care, providers and support staff often express concerns that screening may be time-intensive, laborious, and difficult to address with adequate resources. However, research shows that screening for social needs can be efficient, require little extra from medical staff, and respect patient wishes for privacy while providing needed resources to many. Furthermore, helping people receive resources for their needs leads to better self-reported health and increased patient-initiated contact with health referrals.

Purpose: This project aims to implement universal screening for social needs using an electronic screening tool and an automatic electronic referral to United Way 211 in a primary care setting.

Methods: This intervention takes place in a large, urban, academic healthcare clinic in the western United States. A one-month pre-intervention patient chart review evaluated the clinic's previous process of screening for social needs. A survey was sent to staff to evaluate perspectives of and perceived barriers and facilitators to social needs screening. Due to clinic constraints, this pilot program uses a student in place of registration staff or medical assistants to perform screening. On implementation days from September to November 2022, the student will approach each patient after check-in and ask if they will participate in screening. Patients independently complete the SINCERE questionnaire, a validated screening tool, on an electronic tablet. If they request a referral, they will provide contact information so United Way 211 can connect them to resources. Survey responses will be collected via REDCap and stored in a secure online database. After the intervention, a summary of findings and a short training will be presented to clinic staff and providers, along with a survey to evaluate their perspective changes.

Evaluation: This project will apply the RE-AIM framework to evaluate reach, effectiveness, adoption, implementation, and maintenance. Descriptive statistics and analysis will explain the reach and effectiveness of the intervention for patients: number/percent of patients surveyed, number and type of needs identified, requests for assistance, etc. Staff and provider responses will demonstrate feasibility, usability, and satisfaction of the intervention as well as give suggestions for improvement.

Results: Results will be available by March 2023.

Implications: This project provides a framework for implementing social needs screening with automated referral in primary care or other healthcare settings. It may demonstrate that screening for social needs can help patients receive assistance with needs that affect their health and can be feasible even when healthcare workers have limited time, knowledge, and resources. This project may also demonstrate potential for savings for patients and healthcare systems as it helps to meet patient needs upstream.

HEALTH DISPARITIES

Decreasing Weight Bias Among APRNs and APRN & RN Students through Educational Seminars

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Purpose: The purpose of this project is to decrease weight bias in Pre-licensure RN students, APRN students and APRNs by teaching the non-controllable factors of obesity and weight stigma reduction strategies that can be applied to their future practice, ultimately improving the delivery and quality of care for patients living with obesity.

Background: The prevalence of overweight and obesity has been steadily increasing over the past three decades with up to 66% of American adults experiencing adiposity. These rates are expected to increase to 80% by 2030. Weight bias, stigma and discrimination has been found in physicians, nurses and other healthcare disciplines and is as prevalent in healthcare as it is in the general population which is estimated to be as prevalent as racial bias. Weight bias in healthcare has been shown to actually perpetuate obesity causing negative physical, psychological, and social consequences. Individuals who feel weight stigmatized by their healthcare provider have reported decreased treatment adherence, preventative health participation, trust in their provider and avoidance of follow up care which can delay treatment. Weight stigma reducing strategies in healthcare facilities; i.e., appropriately sized furniture, gowns, beds, exam tables, weight scales, etc. improves accessibility and comfort and leads to a decrease in embarrassment and shame for the patient. Using non-discriminatory communication approaches; i.e., people first language that is neutral, respectful, non-derogatory, free of labels and adjectives regarding people’s appearance decreases weight stigmatizing language.

Methods: Methods to be employed is providing a one-hour educational seminar via zoom and in-person to APRNs, APRN students and Pre-Licensure RN students from the University of San Diego. Attendees are required to complete two pre-seminar activities anonymously. The first is the Thin/Fat Implicit Association Test (IAT) online at Project Implicit Website to measure implicit bias. The second activity is completion of the Attitudes Towards Obese People (ATOP) which is an explicit bias measuring tool. Four weeks post intervention attendees are asked to take the ATOP via survey link again. The one-hour seminar consists of education on implicit/explicit weight bias, the consequences of weight bias, the non-controllable factors of obesity (biogenetic, environmental and social factors) and weight stigma reduction strategies which are evidenced based interventions used to decrease weight bias in healthcare professionals.

Outcomes: This project is in-progress and scheduled to finish in December 2022.

Conclusion: With approximately 42% of Americans experiencing obesity, many nurses will be caring for larger, heavier patients. Weight bias, stigma and discrimination has been identified by people living with obesity as a barrier to healthcare. This presents the challenge that nurses must be better equipped to address their own bias towards patients with obesity and provide empathetic and size-sensitive care in order to improve health outcomes.

Women's Experience of Cancer Treatment during COVID-19 on the Texas-Mexico Border

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Purpose: This pilot study aimed to explore the lived experience of receiving cancer treatment during the height of the COVID-19 pandemic for women living on the Texas-Mexico border.

Rationale/Background: The COVID-19 pandemic exposed existing racial, ethnic, socioeconomic, geographic, and gender disparities in cancer care and highlighted the need for more research in understudied populations. Factors associated with health disparities for communities on the Texas-Mexico border compared to the rest of Texas included Hispanic ethnicity, poverty, lack of insurance and a high school diploma, language barriers, complicated immigration statuses, obesity, diabetes, and cervical cancer even before the COVID-19 pandemic. Non-Hispanic White females with greater than a high school education and who had annual incomes greater than $50,000 reported psychological distress, treatment disruptions, and access to care issues. No studies elucidated the experience of women living on the Texas-Mexico border receiving cancer treatment.

Methods: The study was approved by two IRBs and informed consent obtained from three women living on the Texas-Mexico border who received cancer treatment in El Paso, Texas during the COVID-19 pandemic in 2020. A hermeneutic phenomenological design was utilized following the van Manen approach within a framework of intersectionality for data collection and analysis. One Zoom and two face-to-face interviews were conducted using a semi-structured guide to ascertain participants' lived experience. Interviews were recorded, transcribed verbatim and shared with participants to ensure accuracy and credibility. Transcripts were read in their entirety, categorized, and common themes reflecting the meaning of the experience were developed.

Assessment of Findings: The participants were three women ages 39-71, two Hispanic, one non-Hispanic White, one with an annual income less than $40,000, and the other two with incomes above $100,000. All women had health insurance during the pandemic and had at least some college education. Four common essential themes evolved: *Invisible border*: none of the women perceived any effects of living on the border on their experience. *Pandemic-induced isolation/distress*: Restrictions and effects of the pandemic caused feelings of isolation, anxiety, and distress. Participants reported a lack of mental health and social support services and potential benefits services may have offered in dealing with distress. *Time*: There was a perceived loss of time with family, friends, and social activities. *Unrelenting expectations*: Responsibilities and expectations of caring for others were more challenging during treatment and the pandemic.

Conclusions/Implications: The results of this pilot study provide insight into what it was like for women on the Texas-Mexico border to receive cancer treatment during the height of the COVID-19 pandemic. Women experienced distress and the need for mental health services as reported in prior studies. Additional qualitative and mixed-methods studies with a potential focus on the psychosocial impact on cancer care can be utilized to identify disparities and unmet needs exacerbated by the COVID-19 pandemic. Findings will guide recommendations to improve oncology care and outcomes in this population including policy formation and allocation of resources to support mental health for women with cancer. Participant recruitment, enrollment, and data collection will continue and serve as the author's dissertation research.

Association of Caregiver-Patient Relationship and Cardiovascular Disease

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Aim: To examine if the relationship to persons with dementia affects psychological, behavioral, and metabolic risk factors for cardiovascular disease (CVD) and CVD conditions in family care partners (FCPs). Moreover, we evaluated by race and ethnicity, if the association of the caregiver-patient relationship with CVD risks and conditions differed.

Background: FCPs have a higher risk of developing CVD than non-caregivers. Stressors and distress related to caregiving have been linked to key mechanisms of CVD, with changes in physiological and psychological responses. The quality of the caregiver-patient relationship affects FCPs' cardiovascular health. However, the association of a specific caregiver-patient relationship (i.e., spouse, adult child, etc.) and FCPs' CVD risk and CVD conditions are understudied and poorly understood. Moreover, how the association of the caregiver-patient relationship and CVD risks differs by race and ethnicity is unknown.

Methods: This study was a secondary analysis of data from the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS). We used the 2015-2020 BRFSS data. Logistic regression models included race/ethnicity, caregiver-patient relationship, and their interaction as predictors to model psychological, behavioral, metabolic risk factors and CVD conditions.

Results: Of 6,132 FCPs, 69% were ≥55 yrs., 49% female, 77% non-Hispanic White, and 34% described themselves as being in 'good' health. The caregiver-patient relationship was a significant predictor of behavioral risk factors (tobacco use, heavy drinking, physical activity), metabolic risk factors (obesity, diabetes), and CVD conditions (angina/coronary heart disease, stroke, myocardial infarction) across all race/ethnicity groups (all $p < .05$), while there were no significant differences in depressive symptoms and being overweight. For example, in tobacco use, the caregiver-patient relationship was a significant predictor across all race/ethnicity groups ($p = .0019$) and bordered on significance for Hispanic caregivers ($p = .0548$). Specifically, adult-child caregivers in all race/ethnicity groups significantly differed from spouse caregivers ($p = .0166$) as 46% of spouse caregivers have smoked at least 100 cigarettes in their life compared to adult-child caregivers (41%). For physical activity, the caregiver-patient relationship was a significant predictor across all race/ethnicity groups ($p < .0001$), as well as Non-Hispanic White caregivers ($p <.0001$), and Hispanic caregivers ($p = .0170$). Spouse caregivers in all race/ethnicity groups were less likely to exercise than adult-child caregivers ($p < .0001$). In non-Hispanic White caregivers, spouse caregivers were less likely to exercise compared to adult-child caregivers ($p < .0001$) and caregivers who were the parent of the patient were less likely to exercise compared adult-child caregivers ($p = .015$). In Hispanic caregivers, spouse caregivers were less likely to exercise compared to adult-child caregivers ($p = .0251$).

Conclusions: Our findings demonstrated that the caregiver-patient relationship was a significant factor for CVD risks and conditions in FCPs. The association of caregiver-patient relationship and CVD risks varied by race and ethnicity. In particular, spouse caregivers were less likely to manage their cardiovascular health. Developing and implementing culturally appropriate strategies to manage cardiovascular health in racially and ethnically diverse FCPs, especially spouse caregivers, should be warranted to reduce health disparities associated with caregiving.

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Health Disparities Research: Do US Black Persons Differ Based on Their Origin?

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Background: Most studies of disparities in cardiovascular disease (CVD) and associated risk factors (e.g., hypertension, diabetes, hypercholesterolemia, obesity) classify people of African descent into a single group and rarely disaggregate by origin or nativity. Black Americans include US- and foreign-born people, where the former are primarily descendants of enslaved people who have lived in the US for many generations, and the latter are relatively recent immigrants mainly from the Caribbean and sub-Saharan Africa. Routine aggregation obscures differences in CVD prevalence and vulnerability; whereas basic classification by nativity would reveal meaningful differences in CVD risks and is relatively easy to collect by survey. Yet there is limited research on CVD risk that includes all Black subgroups. To address these knowledge gaps, we conducted an integrative literature review to investigate CVD risks factors among Black Americans with a focus on disaggregated subgroups.

Method: Using an iterative search of major data bases with a special emphasis on PUBMED, we identified articles that reported results on CVD risks factors among Black Americans with a special focus on subgroups.

Results: Several important findings emerged from the identified articles (n=17). First few studies of CVD risks distinguish between African Americans, Black Caribbeans and Black African immigrants. The pattern of findings is a lower prevalence of CVD risks factors in foreign-born versus US-born black people. One exception is higher prevalence of overweight among foreign-born Black US immigrants. Second, risk for CVD among foreign-born black immigrants increases with longer stay in the US. This trend for deterioration in cardiovascular health, also noted among other US immigrant groups, is primarily attributable to environmental, socio-economic, and cultural factors. Third, the distinction between black subgroups is not uniform across the studies, undercutting the utility of the studies to form the basis for a meta-analysis capable of driving important policy changes or medical recommendations. Finally, we found a no qualitative or mixed methods studies on CVD and CVD risk factors within these groups, which precludes understanding experiences and perceptions within and between specific subgroups.

Discussion: Studies examining CVD risk factors included non-uniform statistical analysis of US black subpopulations. We also found a striking limitation in the number of studies of CVD risks in relation to social determinants of health (SDOH) which encompass environmental, socio-economic, and cultural factors known to be critical drivers of CVD disparities. SDOH are instrumental in explaining the differential disease vulnerability across (sub-)populations, so we should expect researchers to examine standardized categories for optimal scientific and clinical impact. The lack of qualitative research is a fundamental gap underscoring the need for high quality ethnographic and anthropological that expose important behavioral and cultural resources that can be leveraged by healthcare providers and delivery systems to better serve foreign-born black individuals.

Conclusion: While it is possible to distinguish between US-born and foreign-born black persons, the importance of this distinction is not reflected in the literature on CVD risk. Sub-group specific studies are recommended to capture the complex heterogeneity of Black American population and inform public health recommendations that address CVD disparities.

Funding: Betty Irene Moore School of Nursing, University of California Davis

Longitudinal Change of Quality of Life Among US Minority Nurses during the Pandemic

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Purpose: This study investigated the longitudinal change in quality of life (QoL) by racial groups and factors associated with the changes in QoL among minority nursing staff in the United States during the pandemic.

Background: Evidence suggests the significant negative impact of the COVID-19 pandemic on healthcare providers, particularly on racial/ethnic minority nursing staff. Factors such as race-based and related discrimination have been found to be associated with a greater risk of developing unfavorable health outcomes and deterioration of QoL among minority nursing staff. While it is important to investigate minority nursing staff's QoL, a longitudinal examination to better understand whether their QoL changed over time and what modifiable protective and key factors are associated with the changes in our target population is essential.

Methods: Through professional networks and snowballing, we recruited a convenience sample of minority nursing staff including certified nursing assistants. Two online, anonymous surveys consisting of reliable and valid self-report measures were used to assess racial discrimination, fear of COVID-19, perceived risk of infection, resilience, social support, and QoL over 12 months. Participants received eGift cards for their participation. We will use descriptive and inferential statistics to describe key variables and compare differences in the change of QoL and other key measures (racial discrimination, fear of COVID-19, perceived risk of infection, resilience, social support) by racial group. Linear mixed-effects modeling with a random slope of time will be used for this main analysis.

Assessment of Findings: Our sample included 513 minority nursing staff (31.4% Black, 21.5% Latino, 17.0% Asian, 13.5% American Indian/Alaska Native, 12.7% Native Hawaiian/other Pacific Islander). About 83.5% of participants were females, 35.6% had BSN, and 26% working in acute settings (e.g., ED, ICU). We will conduct data analyses to address study aims based on the procedures described in the Methods section.

Conclusions/ Implications: Nursing staff play a pivotal role in taking care of patients while they also bear enormous burdens as the healthcare system is overwhelmingly affected by the pandemic. Our research investigated their QoL and factors contributing to changes in QoL over time. These findings will inform the needs and potential approaches to promote minority nursing staff's QoL during this challenging time and beyond.

Funding: ASU

Stigma Attached to Individuals Who Sexually Abuse Children: A Concept Analysis

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Purpose/Aims: The purpose of this concept analysis is to define clearly stigma attached to individuals who sexually abuse children. Nurses are committed to caring for all human beings and recognizing their unique worth, as stated explicitly in the ANA Code of Ethics. Societal stigma attached with child sex offenders (CSO) is strong and pervasive, with negative impacts on both offenders and children at risk of abuse. Understanding the stigma associated with this population is significant because its presence can have severe consequences.

Description of Theory or Definition of Concept to Be Discussed: Walker and Avant's eight-step method of concept analysis was used. A comprehensive literature review of PubMed and PsychINFO was conducted with search terms "stigma" or "attitude" and "sexual child abuse" or "child molestation" and "offender" or "pedophile" or "child abuser" or "child molester." Initially, 134 articles were found, and 20 were selected for final inclusion after title, abstract, and full-text review. Articles included were published between 08/1997 and 09/2021. Articles were included if they contained relevant information, specifically definitions and discussion of the topic. After analysis of the selected articles, a definition of the concept was created. Stigma attached with CSO is a painful process of permanent loss of social status, dehumanization, and social distancing.

Logic Linking Theory/Concept/Method/to Practice or Research: CSO are not well understood or studied in nursing research. Nurses who remain unaware of the insidious stigmatizing process and its consequences cannot practice in a completely authentic way, decreasing the quality of care provided to stigmatized populations. This concept analysis is the first step in examining the stigmatization process and consequences for CSO. This conceptualization adds to the body of science surrounding stigma and nursing.

Conclusion With Statement About Utility of Concept for Practice or Research: Findings included identifying the antecedents, attributes, consequences and empirical referents of the concept. Stigma was differentiated from similar concept such as labeling and bias. This conceptualization can help nurses caring for CSO understand their internal process of stigmatization and begin to combat it. This is crucial because stigma associated with CSO is complex and remains one of the primary help-seeking barriers that prevents treatment access prior to offending. An increased understanding of the stigmatization process can lead to increased nurse self-awareness. This awareness is necessary if nurses are to intervene in the harmful cycle of stigmatization. This concept analysis provides clarity to a complex phenomenon and brings attention to a severely understudied topic within nursing research and informs nursing practice, research, and theory. With a clear definition of a complex phenomenon, additional research can begin on interventions focused on improving nursing care of stigmatized populations, specifically CSO.

Application of the Socio-Ecological Model in Combating Human Trafficking

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Background: Human trafficking and sexual violence among American Indian (AI) women has become a public health issue that is difficult to conceptualize. Understanding risk factors and multiple levels of influence on the complex issue are essential for future research, and a collaborative approach to culturally specific prevention interventions.

Purpose: The purpose of this project is to discuss the application of the Socio-ecological Model (SEM) as a framework to combat human trafficking among AI women.

Description of Concept: The SEM was first developed in the 1970's by Urie Bronfenbrenner to understand human development, which has been further developed to provide a more comprehensive approach to understand the interrelationship that society, communities, relationships, and individuals have on behavior. The Centers for Disease Control and Prevention further adapted the SEM for a comprehensive approach to prevention of violence by evaluating the factors at the societal, community, relationship, and individual level with an understanding that sustainable interventions need to target the different influential levels.

Logic Linking Concept to Research: Human trafficking is a violation of basic human rights that can be prevented with understanding and recognition of risk factors, along with socio-ecological influences at the individual, relationship, community, and societal level. Utilization of SEM can provide a comprehensive approach to help guide culturally sensitive prevention interventions in collaboration with AI communities that are focused on factors that influence behavior to combat human trafficking within the AI women population.

Societal level: at this level factors such as tolerance and norms about human trafficking and sexual violence, policies, and cultural stigmatization of victims, directly contribute to the issue of human trafficking, and need to be recognized and evaluated with any prevention intervention. The community level involves on and off tribal reservations, schools, places of worship, resource centers, or environments where individuals work, live and play. This is one of the most important levels within the AI culture, that is generally made of up of extended families and includes identity recognition through cultural ceremonies. Relationships involve any interaction that an individual has with at least one other person. At this level it is imperative that a holistic approach is taken when evaluating influencing factors, such as what is the role of the family, peers, and intimate partners in human trafficking and prevention strategies. The individual level has different factors that can increase the risk of human trafficking or sexual violence that come from the unique individual and their behavior and personal experience. Specific risk factors for human trafficking include being female with an average age of 13, having a low educational level, exposure to physical and sexual abuse, history of substance abuse, history of legal issues, and lacking social relationships.

Conclusion: While statistics on human trafficking and sexual violence against AI women are staggering, utilization of a conceptual framework or theory can help guide research and implementation of culturally appropriate preventative strategies. The SEM concepts on society, community, relationship, and individual illustrate how interconnected each level effects and influences the other.

Implementing Dietary and Physical Activity Guidelines in a College Health Center

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Purposes/Aims: The purpose of this quality improvement project is to create and test the content validity of an evidence-based printed brochure containing physical activity and nutritional guidelines to address the barrier of lack of time for the provider to provide important and timely information to overweight and obese individuals at a university student health center.

Rationale/Background: Obesity is a major national health care problem that significantly increases morbidity, mortality, and healthcare-related costs. Seventy percent of all adults age 18 and older have a body mass index (BMI) of 25 or greater, indicating they are overweight or obese. Thirty-six percent of college students are overweight or obese. Research has shown that lack of time has decreased weight-related counseling by primary care providers. Printed materials effectively cue individuals to engage in healthy behaviors such as following recommended physical activity and nutritional guidelines.

Methods and Approach: The development of this brochure specifically targeted the cues-to-action portion of the Health Belief Model to help trigger students to make a change. The brochure and survey questionnaire were developed using the U.S. Department of Health and Human Services and the U.S. Department of Agriculture Dietary and Physical Activity Guidelines and distributed to nutrition and physical activity experts (n=17) to test the content validity. The validity was assessed through survey results from a developed questionnaire. These survey results were used to determine the brochure’s content validity index, which was calculated as 94%.

Assessment of Findings/Outcomes Achieved: The content was deemed valid by sixteen out of seventeen participating experts. The goal of this DNP project was met by creating an evidence-based, content-valid tool that providers can use at the university health center to address the barrier of lack of time to provide essential information to patients.

Conclusions: With the successful creation of a valid, evidence-based brochure, the project can be further advanced to assist providers in student health centers in guiding healthy lifestyle modifications regarding dietary and physical activity. This project specifically eases the barrier of time when addressing the issue of obesity. With the simple step of handing the student a content-valid brochure, the cues-to-action for change can occur and lead to further changes regarding diet and physical activity. At a minimum, it can lead to conversations between students and healthcare providers regarding appropriate healthy diet and physical activity changes. The distribution of the brochure will be the start of initiatives to assist providers, address time constraints and provide an efficient way to provide lifestyle counseling regarding diet and physical activity.

HEALTH PROMOTION / ILLNESS PREVENTION

Vaccine Readiness and Strategies for Influenza Vaccine Uptake in a Free Clinic

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Background: The seasonal influenza vaccine is a cost-effective intervention, reducing the risk of all-cause mortality and hospitalization in patients with diabetes, decrease rate of “flare up” in patients with lung disease and reduced risk of an acute coronary event in those with heart disease by 45%. Despite the reduction of health risk, the seasonal influenza vaccine rate remains suboptimal at 51% for people 18-64 years with high-risk conditions during the 2020-2021 season. Additionally, there has been a recent uptake decline in all vaccines related to the criticism drawn from COVID19 vaccine rollout. This criticism, known as vaccine hesitancy and preferably called vaccine acceptance, varies across time, place, and vaccine and can be challenging to providers. As clinics “return to normal” practices following the COVID19 pandemic, the free clinic wants to improve understanding of vaccine acceptance in its population and increase vaccine uptake, by implementing evidenced based strategies for patient messaging and enhanced office system improvement.

Aims: This project aims to 1. improve understanding of vaccine readiness at a primary care clinic and 2. determine if exposure to an influenza vaccine video education compares to non-vaccine-related health education videos in affecting an individual’s decision to vaccinate against influenza.

Method: Consented participants will be surveyed on seven constructs of vaccine readiness (confidence, complacency, constraints, calculation, collective responsibility, compliance, and conspiracy) with the 7C Vaccine Readiness Short form. During the waiting time to be seen by the medical provider, all patients in the clinic will be exposed to video public service announcements (PSAs). On selected clinic days PSAs will include an influenza vaccine-targeted video and on alternate days, the video PSAs will not include any vaccine-targeted health information. Patients will be given the opportunity to receive the influenza vaccine by the end of their clinic visit and asked if they recall viewing an influenza vaccine related video during their wait.

Outcome: Data collected includes intake demographic data, 7C survey questions, the number of influenza vaccines administered, and recall of exposure to influenza education video PSA. The outcome data can improve understanding vaccine readiness of their patient population and target vaccine conversations with patients.

Conclusion: Pending the research analysis, the 7C survey information can offer insight into the patient population beliefs regarding vaccinations. The patient communication strategy of the influenza education video will be evaluated effective strategy in influenza vaccine uptake. Pending the research analysis, the clinic can adopt evidenced based strategies to vaccine recommendation and delivery in clinical practice.

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Using the Columbia-Suicide Severity Rating Scale to Improve Suicide Risk Screening

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Purposes/Aims: The goal of this project is to implement the Columbia-Suicide Severity Rating Scale (C-SSRS) as part of routine patient assessment at an outpatient mental health practice to increase the likelihood of identifying clients at risk for suicidal behavior and increase provider confidence in screening for suicidal behavior. The study site is a Southern California-based outpatient mental health practice that employs a variety of clinicians, including psychiatric-mental health nurse practitioners, to provide mental health care to clients across the lifespan.

Rationale/Background: Approximately 57% of individuals who die by suicide have had at least one contact with mental health providers during their lifetime, and 21% had contact within one month of dying. Early detection of suicidal ideation and behavior is key to reducing the occurrence of suicide in patients receiving mental health care. Traditionally, mental health clinicians use a variety of techniques to assess for the presence of suicidal ideation, but comprehensive suicide assessments should also determine whether an individual has intent or a plan to attempt suicide, as well as whether any suicide attempts have been made previously. The C-SSRS has been proven to be an effective tool to reliably screen for suicide risk in a variety of patient populations, with a focus on stratifying risk based on a number of contributing client factors, including previous suicidal behavior, current intent to commit suicide, and the presence of a method and/or plan for suicide.

Approach: The 8As EBP model was used to develop this project with a clear and focused approach.

Methods/Evidence-Based Intervention: The C-SSRS will be added to the practice’s new client intake forms and teach providers how to use the tool during psychiatric assessment. New clients will fill out the C-SSRS at each visit over a three-month period; those who screen positive for suicide risk will be screened at all subsequent visits. Pre- and post-intervention data will be collected to determine the frequency of risk for suicidal behavior that was detected during routine assessment. Prior to implementation, providers will be assessed for confidence in identifying patients at risk for suicidal behavior using a modified version of the Zero Suicide Workforce Survey; re-evaluation at the end of the intervention period will measure changes in provider confidence.

Evaluation/Results: The project is scheduled to finish in February 2023.

Conclusion/Implications for Future Practice: The C-SSRS is an effective tool for assessing suicide risk in outpatient mental health settings. Its free availability and minimal training requirement make it a cost-effective tool to assess for suicide risk. We anticipate that our project findings will support its continued use at the study site. Other outpatient mental health practices may benefit from using the C-SSRS to standardize suicide risk screening across providers, including advanced practice nurses.

An Online Intervention to Improve Antimicrobial Stewardship

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Purpose: The purpose of this quality improvement project is to increase provider knowledge and self-efficacy in antibiotic prescribing and stewardship in an outpatient clinic setting.

Background: Antibiotics can alleviate suffering and provide life-saving effects when used appropriately. Antibiotic resistance has accompanied the exponential increase in use and over prescribing antibiotics, resulting in over 2,000,000 resistant infections and leading to 23,000 preventable deaths in the United States annually. In addition to preventable morbidity and mortality, antibiotic resistance contributes to a significant financial burden, particularly within the outpatient setting. Approximately 60% of antibiotic expenditure occurs within the outpatient setting, with 20% of pediatric and 10% of adult visits resulting in inappropriate antibiotic prescriptions. According to the Centers for Disease Control and Prevention (CDC), 30% or more of antibiotic prescriptions within the outpatient setting are unnecessary. Thus, antibiotic stewardship programs aimed at educating primary care providers have emerged to moderate antibiotic prescription, including dosage, route, and duration to mitigate negative effects such as antibiotic resistance and infection recurrence. With 69% of nurse practitioners providing primary care, they serve as a potent champion for antibiotic stewardship, advocacy, and education for patients within the primary care setting.

Best Practice Approach: A pre and post-test survey was administered to primary care providers in an outpatient setting. Immediately following the pre-test completion, willing participant providers were offered a 25-minute online Antibiotic Education session based upon the CDC's Antibiotic Training Series. Immediately following the education session, participants completed a post-test survey aimed at assessing acquired knowledge, attitudes, self-efficacy, and confidence in antibiotic prescribing. The post-test survey also included general ratings and attitudes of participants regarding the education session. Average antibiotic prescribing rates prior to and following the education session will be compared.

Findings: This project is planned for the Spring/Summer of 2023 with the intent decrease antibiotic overprescribing. Participants providers' perceptions and understanding of antibiotic stewardship, and resistance will be utilized to guide future PDSA cycles of this quality improvement project.

Conclusion: Project not yet completed.

HEALTH PROMOTION / ILLNESS PREVENTION

Dietary Education to Improve Healthy Food Choices in Patients with Excess Weight

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Background/Rationale: Obesity is a top health concern in the American population. Due to its prevalence and increasing trend, obesity has been labeled an “epidemic” by the Centers for Disease Control and Prevention (CDC). Obesity rates in the U.S. have continued to rise from 30.5% to 42.4% during the last decade (CDC, 2021).

Obesity is a chronic but preventable health condition that affects a person’s overall well-being. It increases the risk of complications, comorbidities, and poor quality of life. Unhealthy dietary habits, characterized by a predominance of refined carbohydrates, fats, and processed foods, are associated with excessive weight, obesity, and overweight status. Primary care settings are a principal point of healthcare where inadequate dietary habits can be assessed and addressed.

Aim: This project aims to improve dietary habits in obese and overweight patients served by a primary care clinic by implementing and evaluating a pilot program of dietary education, which is the first intervention recommended by the CDC and supports weight loss.

Methods: This quality improvement (QI) project will employ a one-group pretest-posttest design. An evidence-based intervention of dietary education based on the Harvard Healthy Plate framework and SMART goal planning will be implemented in a community primary care practice. A dietary behavior assessment using the Starting the Conversation (STC) tool will be administered initially (before intervention), one month, and two months after the dietary education intervention.

Analysis: Descriptive statistics will be used to analyze participants’ demographic data and other categorical variables. Paired t-tests will be used to compare baseline and 1-month post-implementation for the STC tool. Repeated measures ANOVA will be used to compare STC tool values collected during 3-time points (baseline, 1-month post, and two months post-intervention). Conventional content analysis will be used to analyze the qualitative data collected from field notes, follow-up meeting responses and open-ended survey questions.

Results/Discussion: It is anticipated that the results of this project will be determined in Spring 2023.

HEALTH PROMOTION / ILLNESS PREVENTION

Reducing Cognitive Decline

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Dementia is a cognitive impairment which causes progressive loss of memory and behavioral changes, that impact an individual’s level of independence. 50 million people are impacted by dementia worldwide. By the year 2050, there is a projected increase of people who will be affected by dementia, to an estimated 152 million. Dementia takes a toll on the individual, their family, and the overall health system. The purpose of this research is to compare the effectivity of pharmacological versus nonpharmacological interventions on cognitive decline. This research reviews the effects of reducing modifiable risk factors, assessing the effectivity of cholinesterase inhibitors and ultimately to promote cognitive health and function. The PICOT question being investigated is (P) In patients predisposed to developing dementia, (I) how does the use of a cholinesterase inhibitor, (C) compared with lifestyle modifications and the reduction of various disease processes, (O) affect disease progression, (T) over the lifespan? A systematic review was conducted, which examines the outcomes of various research studies pertaining to cognitive function. The Massachusetts College of Pharmacy and Health Science’s library webpage was used to gather data. Databases utilize include: Wiley, Cochrane Library, Cumulative Index to Nursing and Allied Health Learning (CINHAL), and Science Direct. The Key words utilized were *Dementia, Alzheimer’s, cognitive decline, primary prevention, pharmacological and nonpharmacological.* Inclusion criteria for this research includes studies published between 2018 and 2022, full text articles in English, peer-reviewed studies, and journals. Eight quantitative and two qualitative studies were selected. Research outcomes were then organized and compared to one another. Jean Watson’s Transpersonal Caring Relationships theory was utilized to guide the research. This framework focuses on creating a caring/healing environment. Studies found that individuals on cholinesterase inhibitors were noted to have higher incidence of death. Patients taking a cholinesterase inhibitor had an average 1.62 point reduction yearly on the Mini Mental Status exam. On the other hand, physical activity, diet, educational status, and the reduction of comorbidities were found to be effective primary prevention measures that reduce the incidence of cognitive decline. The consumption of antioxidants, vitamin B, vitamin C, vitamin E, niacin, and folate work by fighting off free radicals which are harmful for the brain. It was also found that there is a seven percent risk reduction for developing dementia with every year of education acquired. The findings of this research prove that cholinesterase inhibitors have limited to no effect in preserving cognitive function. Based on these findings, primary care providers should start encouraging and educating patients about primary prevention measures. Primary care providers can assist in reducing comorbidities, encouraging exercise, promoting socialization, and recommending diet modifications. The primary care provider can also begin early screening using the Mini Mental Status exam and monitor any changes from year to year. Since this a newer research topic, there is an indication for further research. This research can help improve health outcomes and reduce the incidence of cognitive decline. Future research should specifically investigate the difference between pharmacological versus nonpharmacological interventions.

HEALTH PROMOTION / ILLNESS PREVENTION

Provider Factors Impacting Access/Uptake of Long-Acting PrEP for Transgender Women

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Purpose: Oral pre-exposure prophylaxis (PrEP) uptake among transgender women (TW), a population disproportionately affected by HIV, remains low. Long-acting injectable cabotegravir (CAB-LA) for PrEP, was approved by the FDA in 2021. Because CAB-LA is a single intramuscular injection given every eight weeks by a healthcare provider, it is likely to improve PrEP uptake and adherence in TW. This study explored healthcare providers' CAB-LA knowledge, attitudes, challenges, and prescribing preferences for TW patients.
Approach: We conducted 45-minute Zoom in-depth interviews with N=17 United States-based healthcare providers (e.g., PrEP prescribers and nurses who deliver PrEP information) who prescribed PrEP to at least one TW in the last six months. First, we asked providers about their current CAB-LA knowledge. Then, we provided a PowerPoint training on this product to ensure uniform understanding among participants. The remaining interview questions focused on CAB-LA acceptability; willingness to prescribe CAB-LA to TW; potential challenges to medication delivery; and solutions to challenges, including opinions on tailored injection delivery strategies such as self-injection and injection in drop-in clinics. Via thematic analysis, two independent coders employed an inductive approach to identify and characterize anticipated themes from the interview guide (*a priori codes*) and themes that organically emerged from the text (*in vivo codes*).
Outcomes: Participants had a mean age of 43 years [range: 31-64]; 8(47.1%) identified as people of color, and 13(76.5%) as women. Slightly more than half 9(52.9%) resided in the Eastern region of the US and/or were Nurse Practitioners 10(58.8%). Participants saw an average of 5 TW per month, an average of 3 of whom were seeking PrEP. Many participants (n=12) were aware of CAB-LA, but indicated a need for additional training. All participants found CAB-LA acceptable and were willing to prescribe it to TW. Most (n=11) anticipated few challenges to CAB-LA implementation. However, others (n=4) anticipated major potential issues, including logistical and scheduling concerns that would impede CAB-LA integration into clinic flow, and concerns about staffing shortages that would undermine the clinic's ability to facilitate visits to inject CAB-LA.

Providers noted patient-level considerations, including TW being injection/needle hesitant (n=4) due to the size of the 3mL injection, medication side-effects, and possible interactions with gender-affirming hormones (n=4). Providers reported that commuting to the clinic for injections could pose an adherence challenge (n=6). Providers expressed support for self-injection (n=13) and injections at "drop-in" clinics (n=8) to overcome these challenges. However, they specified that for these strategies to be successful, staff would require additional training, and other capacity-building efforts would need to be in place (e.g., task shifting, support for TW who use CAB-LA outside of the clinic setting).
Conclusions: Providers support CAB-LA for TW, yet CAB-LA provider education is necessary. Some clinics will require creative workflows, including self-injection and injection at "drop-in" clinics, to successfully roll-out CAB-LA. These changes must also create opportunities for TW to learn/consider whether CAB-LA is right for them. Lastly, the scientific and clinical communities must work together to create CAB-LA education, trainings, and workflow models, based on providers' needs identified in this work.

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Long-Term Health of Mothers Relies on Integrative Care and Flexible Lifestyle Programs

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Purpose/Aims: Among reproductive-aged women at high risk for Type 2 Diabetes (T2DM), 1) what is personal health-risk awareness, 2) what is lifestyle-change interest, and 3) what are barriers and motivators to participation in lifestyle-change programs?

Rationale/Conceptual Basis/Background: Over one in five reproductive-aged women have prediabetes, a major risk factor for T2DM, infertility, miscarriage, and adverse metabolic outcomes in their children through fetal programming. Experiences during the reproductive years provide information about a woman’s future risk for T2DM; her risk is seven to 10 times higher if she has had gestational diabetes (GDM) and two to four times higher if she has had a hypertensive disorder of pregnancy (HDP). Targeting reproductive-aged women at high risk for T2DM provides an opportunity for prevention-strategy implementation earlier in the life course and at the earliest stages of their children’s development. However, little is known about such women’s diabetes risk perceptions, or about their knowledge, beliefs, or barriers/motivators related to lifestyle change. This information is needed to understand how to engage these at-risk women in prevention programs, tailor motivational interventions for them, and prevent morbidity and mortality.

Methods: Focus groups were used to facilitate an understanding of women’s health risk, interest in formal lifestyle-change engagement, and women’s barriers and motivators to lifestyle change. Eligibility criteria were: biological females, aged 18 to 40, who had had at least one pregnancy, and who had one of the following health risks: 1) a complication during pregnancy (i.e., GDM, HDP), 2) a diagnosis of prediabetes, or 3) a BMI classified as obese. Three focus groups were conducted online via Zoom with 20 participants; focus-group sessions were grouped by health risk. Data collection included audio-recording focus-group discussions. Qualitative content analysis was used. Deductive codes were used to identify concepts related to the research questions (e.g., barriers and motivators). Inductive codes were created for novel insights shared by participants (e.g., being focused on the present). The codes were then organized into categories and themes.

Assessment of Findings/Outcomes Achieved: Women’s personal health-risk awareness often was of general risk (e.g., overweight might lead to other risks) and rarely reflected awareness connected to their personal health history (e.g., GDM increases their lifetime risk of developing T2DM). Participants reported that their health risks weren’t adequately followed/addressed by healthcare providers. All women expressed interest in making healthy lifestyle changes, including engagement in formal programs, but they shared multiple barriers to healthy behavior change related to being “busy moms.” Women emphasized the need for social support and realistic solutions that accounted for the dynamics of motherhood and family life. Common motivators included the desire to maintain health for their families and set a good example for their children.

Conclusions/Implications: Participants lacked knowledge and were eager for information. Healthcare improvement opportunities include better coordination of care between primary and specialty-care providers, and more frequent communication and education on diabetes related health risks and long-term health. Formal lifestyle programs should tailor content by providing multiple formats and flexibility of scheduling, and should leverage peer support for sustained engagement.

Funding: This project was funded by a grant from the Educational Resource Development Council (ERDC) at the University of Utah.

Fostering Resiliency in American Indian Children through Art and Education

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This pilot project implemented culturally responsive and trauma-informed teaching practices at the classroom level by promoting student perceptions of subjective wellbeing and reducing in-situ trauma experiences. Culturally informed teachers in American Indian (AI) communities are associated with a lower prevalence of disparities in mental health, substance use, violence, and suicide (Burnette & Figley, 2016). Yet, there remains a dearth of information on classroom interventions which foster resiliency in AI children. This scarcity of information on effective classroom interventions is troubling given a recent surge in literature discussing *educational trauma*. As defined by Gray (2019), "Educational Trauma is the cyclical and systemic harm inadvertently perpetrated and perpetuated in educational settings" (p.13). Examples of such trauma range from intensive to mild including, exclusionary discipline practices, shaming, as well as culturally inappropriate curricula. Racial discrimination and social exclusion lead to health detriments by elevating physiological stress responses (Pascoe & Richman, 2009; Sawyer et al., 2012). Improving strength and resiliency of AI children through cultural connections including art, music and dance reduces the harm associated with past trauma (Sasakamoose et. al., 2016). This project evaluated a trauma-informed and culturally responsive classroom-level intervention developed through a community-based participatory process as a means of increasing resiliency and promoting the wellbeing of third grade students in a public school serving an AI community. The intervention's essential components promote student self-expression through art, enhance teacher understanding of trauma-informed, culturally responsive pedagogy and facilitate teachers' skills in promoting student-teacher classroom relationships.

A total of 57 third graders were assigned to one of three participating teachers. Third graders were purposefully selected at the behest of school leaders and community members as re-traumatization seems evident beginning by the 4th grade in this school system. Monthly the children engaged in art-based activities designed to express their perceptions of self-identity and subjective well-being in each session. During these same months, classroom observations were performed using the CLASS preK-3 observation protocol (Allen, et.al., 2011) with individual feedback given to each participating teacher. Additionally, the teachers reflected on the children's artwork, its meaning and how it can be used to further improve classroom climate during the coming month. Baseline data was collected from students using the Sources of Strength (SOS) Instrument (Kelley & Small, 2016) and compared with post-test data. Similarly, the comparison of CLASS protocol scores evaluated teacher behavior change.

The results showed the mean of teachers' CLASS observations scores increased, significantly, ten percentile points, from 53rd percentile to the 63rd percentile, when compared to the instrument's norm group—teacher-student relationship scores of teachers in the United States. There was no significant change in aggregated student SOS scores; however, when disaggregating these scores by classroom. One classroom of students did show a significant gain ($p<.05$) and this seemed related to the teacher's growth in student-teacher relationship building. In conclusion, student resiliency seems to improve when teachers seek to improve student-teacher relationships within the classroom and use students' self-expression to further that relationship.

Funding: Supported in part by internal seed grants from Montana State University.

Video-Based HPV Intervention: Key Variables and the Intent to Vaccinate

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Purpose: Guided by the Health Belief Model (Rosenstock, 1974), the purpose of this secondary data analysis is to investigate the mediating effects of HPV-related knowledge, perceived risks, facilitators, barriers on vaccination intent among young adults aged 19-26 in the U.S.
Background: Human papillomavirus (HPV) is the most common sexually transmitted infection (STI) in the United States with estimated 40% of 15–59-year-olds were infected in 2018 (Lewis et al., 2021). HPV is a cause of many health concerns including genital warts, cancer of the cervix, vagina, and vulva for women, cancer of the penis in men, and cancer of anus and oropharynx in both women and men. Notably, 99% of cervical cancer, the fourth most common cancer in women, is caused by HPV (WHO, 2022). HPV vaccination is a safe and effective way to protect against cancers cause by HPV infections (CDC, 2021), therefore, it is crucial to increase HPV vaccine uptake to reduce HPV infection rates and associated health consequences. Video-based education strategies have shown promising results in raising awareness and knowledge on cervix carcinoma, pap smear, and intention to receive HPV vaccine (Krawczyk et al., 2010; Drokow et al., 2021).
Methods: A sample of 215 young adults aged 18-26 who had not received HPV vaccination were recruited to participate in a randomized controlled trial (RCT). The intervention group (n = 104) watched the “What is HPV” video, and the control group (n = 111) read the CDC HPV Fact Sheet. Demographic information was collected pre-test. HPV vaccination intent, HPV-related knowledge, perceived risks of contracting HPV, barriers, and facilitators of receiving HPV vaccination were measured both at pre and post-test. We will conduct a mediation analysis to examine mediating effect of key variables (HPV knowledge, perceived risks, perceived, facilitators and barriers to vaccination) on vaccination intent.
Results: After the intervention, the HPV vaccination intent increased from 59.6% to 71.2% in the intervention group; however, dropped from 65.8% to 55.0% in the control group. We plan to finish mediation analysis to understand the underlying mechanism of the difference between the two groups by December 2022.
Implication: The results from this secondary data analysis will provide more insight on how a brief, effective video-based intervention increased HPV vaccination intent and inform development of future interventions.

Gender Differences in Burnout and Coping in Backcountry Search and Rescue Workers

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Background: Backcountry Search and Rescue (BSAR) are a subgroup of first responders who are trained in the use of specialized equipment in order to locate, assist, and safely remove individuals who are lost, injured, stranded, or entrapped in remote areas of the state. These volunteers are regularly exposed to traumatic events in their work, leading to an increased risk of adverse mental health outcomes, burnout, and stress injuries. Furthermore, there is limited research exploring the stress differences between men and women within this field. To date, there is no data demonstrating the differences in burnout and coping between men and women among BSAR workers.

Purpose: This paper seeks to explore the differences in stress, burnout, and coping between men and women among Colorado BSAR workers to aid in devising tailored strategies and interventions to alleviate stress and burnout; and address the significant issues of retention and diversity within the field.

Methods: A secondary analysis of the data from the parental study *Burnout & Stress Injuries among Backcountry Search and Rescue: A Cross-sectional Analysis* by Laura McGladrey and Dr. Paul Cook will be performed. The parental study performed a cross-sectional study of BSAR volunteers in all 64 counties in Colorado was conducted between November 9th-30th 2021. The survey included the Maslach Burnout Inventory, Secondary Traumatic Stress Scale, Beck Hopelessness Scale, and self-reported substance use scales. Analysis of data was conducted using SPSS version 28.

Results: Currently, results are pending. In using these tools and data, this study plans to determine (i) whether there are different levels of stress or burnout between men and women backcountry search and rescue workers and (ii) what methods of coping seem to be implemented by these men and women, and (iii) how effective those strategies are in managing stress.

Teams Model of Clinical Education: Creating Practice Ready Graduates

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This project is being implemented at Arizona State University with graduate and undergraduate prelicensure students, aimed at increasing the practice readiness of graduate nurses. The project is a unique clinical education model where students are assigned to a clinical agency/unit for the duration of a nursing program. Transitioning away from rotating students through clinical facilities, cycling in and out each semester and not spending any significant time in a setting, we moved toward a cohort-based model where students are assigned to a single clinical facility for their program. Students have placement on a specific unit, remain with the same group of students, and at the same facility, stepping out for select specialty experiences, meeting all program requirements.

The constant cycling of nursing students leaves little opportunity for meaningful student learning and truly understanding the role of the nurse. Students are often brushing the surface of learning in on a unit when they are quickly uprooted and transferred to a new organization at the end of a term. Furthermore, student nurse preceptors rarely get to see students' progress and celebrate student learning successes. Preceptors are valuable and time is limited. This longitudinal approach to clinical education allows preceptors and students to get to know one another over course of time. Students learn the culture of the organization and are socialized into the profession to create a more practice ready graduate.

Students complete a survey outlining personal characteristics, areas of interest in patient care, and behavioral responses to work environments. Students are matched with an agency that aligns best with their characteristics and goals. They are placed on a team, given a team name, and begin to develop identity as they become a part of a unit. Students are surveyed each term throughout the program on their experience. The survey is aimed at understanding the student perspective and overall understanding of the model. Clinical partners are surveyed each term to gain the bedside nurse prospective on how the project.

Students were surveyed twice in each semester of the program. At week 8, students reported uneasiness about clinical experiences (being new at something, fearful of making a mistake, and not knowing what to expect). At week 16, students reported positive feelings of their Team, their clinical faculty, and comradery. Partners were also surveyed and described the model as fostering the clinical professional development of new nurses; giving students a better, more insightful, and accurate picture of the different types of nursing as well as leading to increased comfort and confidence in the clinical area.

When a thoughtful program is created to build confidence in new graduate nurses through immersion experiences in a consistent and welcoming environment, opportunities for learning grow. Students are inducted into organizational culture and create a sense of belonging. It is purported that this will lead to increased nurse retention and reduced onboarding cost for practice partners. This is an aim of future study as the Teams Model measures additional cohorts and longitudinal looks at job placement data.

Developing an Escape Room Simulation to Address Patient Falls

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Purpose: This project used an escape room concept for new nurse residents employed in a Veterans Administration facility in the Pacific Northwest to address the problem of patient falls.
Background: According to Centers for Disease Control and Prevention, falls among adults aged 65 and older are common, costly, and preventable. Falls are the leading cause of fatal and nonfatal injuries among older adults. Data were provided by VA leadership using quarterly total falls (n=82 from January-March 2021) resulted in injury (37%) with 60% being accidental, 80% being unwitnessed, 27% of patients were assessed as being confused or having an altered state, 23% were assessed as having a Morse Fall Score over 45, and 77% of those who fell were assessed to be independent or requiring standby assist.
Approach: Clinical simulation escape rooms are a strategy that is inexpensive, portable, and engaging. Escape rooms have specific goals or objectives and can bring teams together to help identify practice gaps. Often puzzles and cues are used as a nonlinear approach to move teams through a scenario. An escape room was chosen as a low technology approach for new nurse residents as an interactive learning experience in this VA facility.
Methods: Planning involved collaboration with the Fall Prevention Committee Chair, nurse resident educators, and simulation lab coordinator. Nurse residents were identified, sim room availability arranged, teaching roles were identified and assigned, props and equipment selected for the scenario, dates confirmed, and invites sent to staff. Implementation of the escape room training involved two scenarios: an inpatient fall prevention and an outpatient post fall scenario. The scenarios were verbally rehearsed with educators, rooms were designed to replicate the inpatient and outpatient room scene. Pre and post tests were created, along with learner packets. Two hours were allocated for the pretest, the pre-briefing and education, both scenarios, debriefing phase, the post test, and feedback was solicited from participants.
Outcomes: Descriptive statistics were collected and analyzed based on the pre-post fall test, the overall evaluation, and feedback and comments from nurses were summarized. Using a 5 point scale of 1=very ineffective to 5=very effective, the mean participants scores were 4.86, and participants ranked the overall training (4.80), their confidence with performing a Morse Falls scale assessment (4.6), confidence with correctly identifying when to activate a bed alarm (4.8), confidence with correctly completing the TIPS scale (5.0) and satisfaction with the escape room experience (4.8).
Conclusion: Based on nurse residents' feedback and pre-posttests, it can be concluded that an escape room is an effective strategy to enhance a skill or learn a new concept. It was recommended that fall prevention should be offered to other interdisciplinary team members to expose them to the fall risk factors so that as a team, all healthcare personnel can be better prepared to reduce patient falls. Newly licensed RNs and nurse residents can benefit from on-going training opportunities using the escape room strategy of gamification of critical situations.

Better Together: Benefits of Team-Based Learning in Skills Lab

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Purpose/Aim: This project aims to assess the benefits of team-based learning (TBL) as an approach to entry-level nursing education in laboratory and simulation environments by evaluating the use of this approach to educate first semester baccalaureate students enrolled in a nursing fundamentals clinical course.

Rationale/Background: Teamwork is an essential component of the nursing role, yet new nursing students are often uncomfortable with teamwork due to past negative experiences. However, when implemented effectively, TBL approaches have demonstrated benefits in classroom settings and can enhance student performance through improvements in engagement and knowledge. These benefits have made TBL a popular approach to classroom instruction, but less is known about the benefits of using TBL for clinical preparation in the laboratory or simulation settings.

Description of Undertaking: The nursing fundamentals instruction team implemented TBL in laboratory and simulation environments at the start of the pandemic, to maintain instructional integrity, while complying with room capacity restrictions. Three specific TBL activities were utilized, a Skills Relay, an Unfolding Role-Play Simulation, and a High-Fidelity Summative Simulation. In the Skills Relay activity, teams practiced a series of fundamental skills, which they performed under time constraints. In the Unfolding Role-Play Simulation teams of students were assigned to an interprofessional role and charged with caring for a simulated client with changing clinical needs; this simulation reinforced clinical judgment, delegation, and collaboration. The High-Fidelity Summative Simulation took place at the end of the semester and assessed critical thinking, prioritization, and safety, during the discharge process. Each activity was designed using the four pillars of TBL. Consistent with TBL, instructors randomized student teams, provided preparatory materials, facilitated the activities, and guided peer evaluation through debriefing. Each of these TBL activities afforded students the opportunity to learn from their peers and navigate complex situations in a supportive team environment.

Assessment of Outcomes Achieved: These TBL activities have been successfully implemented over multiple semesters, during which time instructors observed a higher degree of cooperation between students, enhanced interpersonal communication, and improved problem-solving. Feedback from students has been very positive. Anecdotally, numerous students have reported that the TBL activities improved their clinical confidence and provided an enjoyable means to facilitate learning.

Conclusions: With proper implementation, TBL can be an effective means to supplement entry-level nursing education within the laboratory and simulation environments. Through adherence to the four pillars of TBL instructors can design unique and practical activities that engaged students and support their overall learning. Instructors also found that TBL activities were useful for rapidly assessing areas of student need and activating early intervention measures. The benefits of TBL have been clearly demonstrated within this course and TBL should be evaluated for implementation within other clinical courses. If TBL were to demonstrate significant benefits across the curriculum, then it should be permanently integrated into nursing clinical education.

INTERPROFESSIONAL EDUCATION / COLLABORATION

Nursing Students Partnering with the American Red Cross for Clinical Experiences

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Purpose: In recent years, many barriers have impeded the opportunity for nursing students to complete their clinical hours in local healthcare facilities. In Arizona, the American Red Cross Disaster Health Services (DHS) has begun to explore and implement various clinical opportunities through the Academic Service Learning (AS-L) process in the local communities for students currently enrolled in nursing programs. This project aims to provide clinical experiences for nursing students and present preliminary data on the AS-L partnering process.

Rationale/Background: Shortages of clinical sites are a challenge for nursing students to complete their nursing program clinical hours in a timely manner. Identifying opportunities that provide meaningful learning experiences to meet clinical course and accreditation outcomes is challenging. Considering these challenges, the American Red Cross has granted the Susan Hassmiller Award to Arizona DHS to promote clinical partnerships with nursing programs. This pilot project intends to expand clinical partnerships - nationally.

Project Description: The American Red Cross DHS coordinator has established a process to partner with local nursing schools to provide clinical opportunities that meet curricular and accreditation outcomes. These clinical opportunities are coordinated between the DHS and the nursing school clinical instructors. Nursing clinical instructors determine how the AS-L community clinical activity will meet clinical course objectives, accreditation, and nursing state board guidelines.

In general, clinical activities are focused on age-specific activities over the lifespan. Students are supervised by a nursing instructor, and hours are tracked via the American Red Cross AS-L program for reporting purposes and nursing schools' documentation for meeting clinical objectives.

Assessment of Findings/Outcomes Achieved: Through this partnership, nursing students obtain clinical hours that broaden their experiences with various ages and possibly vulnerable clients affected by disasters. This partnership and collaboration provide services that aid diverse populations in times of greatest need. Graduate nursing students have assisted clients who had been displaced from a multi-family-fire complex to replace lost prescriptions, eyeglasses, and durable medical equipment. The nursing school accepted 60 clinical hours for this partnering service. Further examples of clinical experiences include undergraduate nursing students participating in various services - blood drives, local health teaching/learning activities related to public safety, disaster preparedness, and hands-only CPR. Nursing schools participating in these partnering services have determined that 10-12 hours for each activity will be part of the total clinical course hours.

Conclusions: Through partnering with the American Red Cross AS-L program, nursing students may graduate with the inclusion of effective, interactive clinical experiences by responding to human needs related to community disasters, local healthcare events, and public services. One of the developmental goals for Healthy People 2030 is to: "Increase the inclusion of core clinical prevention and population health content in undergraduate nursing and graduate nurse practitioner training programs." Partnering with public health organizations to provide sound evidence-based practice baseline data will promote health and wellness for our diverse populations.

Funding: Project funded by Susan Hassmiller and the American Red Cross

INTERPROFESSIONAL EDUCATION / COLLABORATION

Safety Needle and Protective Device Innovation: Nurse as User and Innovator

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Background: Needle-stick injuries are common clinical anomalies that may occur during medication preparation and administration as well as after administration. As the first line of care, nurses are representative users of safety needles who have the best understanding of problems related to the use of these devices and the best practitioners of human-centered designs. Nevertheless, their motivation to participate in innovative research and development (R&D) and personal development in this regard are limited by the lack of related training in school and clinical in-service education programs and organizational cultures that pay relatively little attention to innovative R&D. Drawing on the design thinking process, this project guided a group of master's students with clinical experiences through the R&D process of a safety needle and protective device and introduced collaborative cross-disciplinary R&D involving industry experts. It embodied the three foremost spirits of R&D—caregiver-centered, industry orientation, and cross-disciplinary development—and successfully demonstrated nurses' role in R&D and their process of innovative practices.

Purpose: This project aimed to shed light on the process and outcomes of medical device R&D by master's nursing students with the use of design thinking and propose recommendations for usability evaluation research.

Model Approach: Design thinking is an iterative, non-linear process of thinking. The R&D team underwent five cyclic phases—Empathize, Define, Ideate, Prototype, and Test—and designed a nurse-centered product that can resolve the problem of needle-stick injuries during medication administration.

Outcomes Achieved: The team completed the research and development of a safety needle and protective device, applied for a utility patent, and won awards in innovation competitions.

Conclusions & Suggestions: The outcomes of this project can provide a frame of reference for promoting nursing innovation in both school and clinical settings. Future studies can conduct practical testing on various safety needles with regards to the time needed for medication preparation and the incidence of needle-stick injuries. The findings can serve as a basis for product optimization and policy promotion, in order to enhance the safety of the care environment and realize the core values of nursing innovation.

Keywords: nursing innovation, design thinking, human-centered, cross-disciplinary, safety needle, usability

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Innovative Development of Pediatric Integrated Tubing Fixation: Users' Perspectives

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Background: Nurses' knowledge of the patients' problems is based on bedside observations. They are the gatekeepers of patients' health; and if they can integrate patient needs, professional knowledge, clinical setting, and multidisciplinary collaboration, they will be able to solve pain points in inconvenient care, increased costs, and threats to life due to the current medical supply shortage. Endotracheal (ET tube) intubation is performed in critically ill patients to maintain cardiopulmonary circulation, an oral bite is inserted to prevent restlessness and tubing bite, and a nasogastric tube (NG tube) is used for gavage, drug administration, and drainage. In clinical practice, adhesive tapes and cotton strings are used to secure these three tubes. However, this care method often results in skin pressure injury and tubing detachment, which threaten patient safety. There are several commercially available tubing fixation devices that are not user-centric, resulting in low penetration rate and they are not suitable for use in children. In this project, patient safety and nurses' views were combined to develop, to our knowledge, the world's first pediatric three-tubing integrated fixation device, which will contribute to global care quality.
Purpose: This project aimed to share the three-tubing integrated fixation device process and results of the nursing innovation team based on a user-centric concept, and also to propose future research and recommendations to policy making.
Framework Utilization: Our team used the Diamond Model, which include Discover, Define, Develop, and Deliver phases (4D model) in design thinking for product innovation. The device consists of: main body, open part, auxiliary body, fixation part, knob base, main body perforation, auxiliary body perforation, fixation belt perforation, fixation belt, fixation groove for NG tube, buckle button, buckle groove, fixation groove for ET tube, baffle, oral bite cap, and fixation groove for oral bite. This device does not require adhesive tape, prevents skin injury, sits three tubes simultaneously, is compatible with tubes of different specifications, is easy to dissemble and transport, applies to patients of all ages, and satisfies various nursing needs.
Outcome Achieved: The 4D model was used for research, development, and modification of a pediatric integrated fixation device, application of invention patent, winning of competition awards, and planning of technology transfer authorization with a manufacturer.
Conclusion and Suggestions: This project contributed to demonstrate that user-centric research and development could meet clinical care needs and provide a framework for driving medical device innovation in clinical and school settings. In future studies, usability and effectiveness of experimental studies and empirical analysis of existing tubing care methods and integrated tubing fixation devices can be carried out. The results of the study can provide a basis for the development of clinical tubing care guidelines and policies to create a friendlier and safer care environment.
Keywords: nursing innovation, medical device, user-centric, design thinking, double diamond model

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INTERPROFESSIONAL EDUCATION / COLLABORATION

Implementation of Happy HAPI Huddles for Engagement and Improved Outcomes

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Hospital Acquired Pressure Injuries (HAPIs) are often caused by gaps in knowledge and deviation from best practices, which contributes to repeated events and can lead to demoralization amongst staff, poor patient outcomes, and increased expenditure. Staff at 128 bed Acute Care Medical Center were disengaged, desensitized, and lacked the knowledge on how to prevent HAPIs from occurring. Noticing this trend, the wound nurse and nursing patient outcomes coordinator collaborated and implemented a new process to engage staff and safely discuss the occurrence of HAPIs in a non-punitive manner (Kaplan et al., 2019). Previously, the HAPI information was found from a wound nurse chart dive and shared with staff at shift change huddles, where many other things were covered other than the HAPI. A dedicated forum was needed to discuss the significance of HAPI occurrences.

When a HAPI is identified on a nursing unit, a thorough review is conducted by a quality RN and wound nurse. Staff are notified of the HAPI and the “HAPI Huddle” is scheduled. The unit’s “Skin Resource RN” completes a chart review prior to huddle to provide insight. The HAPI Huddle is comprised of nursing leaders, nursing educators, quality RN, wound nurse, respiratory therapists, nurses, and patient care assistants. In a calm and organized manner, the team reviews objective data, what was done well, and opportunities for improvement. When the HAPI Huddle is concluded, findings and follow-up are sent to staff and hospital leadership.

After conducting HAPI Huddles across inpatient units, HAPIs decreased dramatically. Huddle was implemented in May, 2022. HAPIs decreased from 18 in Q1 and Q2 to 3 in Q3. During the Huddle, the frontline staff can offer insights into aspects of the patient’s care that are not discoverable in the chart. Staff will bring up concerns about process barriers and education needs in which leaders can act on quickly. Hospital staff are engaged and unafraid to participate in HAPI Huddles, which leads to better collaboration, communication, and accountability. Practicing HAPI Huddles have been an effective and non-punitive way to raise awareness and educate team members about best practices and risk factors. Staff are engaged and focused on implementing interventions early to prevent HAPIs. The HAPI Huddle has brought awareness and knowledge to staff by enhancing quality of care.

INTERPROFESSIONAL EDUCATION / COLLABORATION

Say Goodbye to H.A.I.s!

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Introduction: Scottsdale Thompson Peak Medical Center (STPMC) is a 120-bed acute care hospital in Scottsdale, Arizona. Compared to other hospitals its size, STPMC was underperforming for hospital acquired infections (HAIs) such as Central Line Associated Blood Stream Infections (CLABSI) and Catheter Associated Urinary Tract Infections (CAUTI). The Nursing Patient Outcomes Coordinator and Infection Prevention Registered Nurse teamed up to work with leadership, nursing education, nursing, and physicians to decrease the standard utilization ratios (SUR) and standard infection ratios (SIR) for STPMC.

Methods: The Nursing Patient Outcomes Coordinator and Infection Prevention RN completed re-education to nursing supervisors, nurses, and directors on the impact of line utilization and infections. Urinary Catheter and Central Line Resource Nurses were utilized to help perform audits, provide education, and be unit champions for early catheter/central line removal and care. Weekly rounds were done surveying the infection risk of the lines and included the nursing staff to discuss the indication for the line. Nursing staff was encouraged to discuss the patient's clinical necessity for the line and advocate for early removal if indicated.

Results: After consistent education and engaging with nursing staff through weekly rounds, infection rates of indwelling urinary catheters and central lines decreased. CLABSI rates dropped from 2.00 (STPMC total) in Quarter 1 2022 to 0.00 (STPMC Total) Quarter 2 2022. CAUTI rates also decreased from 0.90 (STPMC Total) in Quarter 1 2022 to 0.00 (STPMC Total) in Quarter 2 2022. Induvial units decreased their total usage of devices and opted for other non-invasive measures. Additionally, nurses were engaged in their shared governance structure by educating and discussing their improvements in patient outcomes and autonomy over their patient's care.

Conclusion: Engaging nursing staff through education can lead to a reduction of HAIs such as CLABSI and CAUTIs. Nurses felt they had autonomy over their patient's care and could directly impact their patient's outcomes. Resource nurses continued sharing education and audit findings with their peers and were able to provide education and coaching in a non-threatening peer-to-peer format. After sharing the outcomes of their success, nursing staff became more motivated to reduce utilization of central lines and indwelling urinary catheters and continues to practice advocacy for early removal and alternative methods to improve patient outcomes.

Evaluation of Rural Provider Satisfaction Using a Hub and Spoke Practice Model in FASD

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This Quality Improvement (QI) project aims to assess provider satisfaction with the addition of a hub and spoke practice model between two pediatric, rural healthcare clinics in Alaska. The pilot project will be centered around the hub and spoke practice model, with the hub being the more experienced clinic, which houses a team coordinator and an Fetal Alcohol Spectrum Disorder (FASD) team or FASDx. The spoke will be the team at in rural, southeast Alaska. Existing provider services in the hub model do not allow for clinician support. The addition of the spoke will provide education and support for participating clinicians. The hub clinicians will be available throughout the FASD evaluation, while spoke clinicians are performing the face-to-face evaluations locally and utilizing the hub team as necessary. All activities are within the scope of practice of each licensed clinician and not considered experimental in nature.

This author is completing the above project as a Doctorate of Nursing Practice (DNP) student and the site for the project is where they currently work as a clinician, on the FASdx team. Alaska is a very large state with sparse teams and lack of access to care for many children, especially when it comes to identification of FASD. This hub and spoke model mimics that of a similar model out of Mannitoba, Canada, where they have similar populations and barriers to care (Benoit et al., 2002).

Background: Overall, there is a paucity of literature discussing the formation of a rural team specifically for the purposes of FASD diagnosis, with the use of a spoke method. Benoit et al. (2002) described using telehealth for the diagnosis and team meeting for portions of the evaluation; however, the study only focused on the individual exams using telehealth (Benoit et al., 2002). There was some discussion on FASD diagnoses, a high rate of missed diagnoses, and a lack of standardized training across the world for those completing the evaluations (Popova et al., 2019). Another study was appraised, examining interprofessional or multidisciplinary teams and the value of a lead clinician (Walker, 2021). This study demonstrated the value of a central clinician serving as the center of a team who brings the evaluation together and creates a line of steady communication that can keep evaluation momentum (Walker, 2021).

Conclusion: Given what is already being done with telehealth services in rural areas on FASD, it is prudent to attempt a QI project to improve an existing model, to expand care into rural areas of Alaska (Whittingham-Coons & Harding, 2021). It has been published publicly that the State of Alaska FASD Division fully supports movement of FASD services into a hub and spoke type model of care as noted in the McDowell report (2018) and the Telehealth Feasibility Study (Western Interstate Commission for Higher Education Behavioral Health Program [WICHE-BHP], 2021). It is felt that this QI project supports the State of Alaska and their beneficiaries.

The Impact of Empathy Training Among Health Professions Students

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Purpose: The purpose of this project is to pilot if empathy education introduced to health professions students using a multi-disciplinary approach has an impact on empathy.

Background: Empathy is an essential skill and core competency that enables healthcare professionals to discover the internal state of another person and motivates them to respond therapeutically. Numerous studies demonstrate a decline in empathy among healthcare professionals over time, and a lack in empathy can result in patients feeling devalued and is associated with healthcare provider burn out.

Empathy training improves the ability of healthcare providers to care for challenging and often stigmatized populations (e.g., people who experience mental illness and substance use disorders). While it is widely accepted that reducing stigma and increasing empathy toward patients is desired, little is known regarding how to develop the requisite knowledge, skills, and attitudes among health professions students to prepare the future workforce to endure empathy in the face of professional pressures.

Methods: A mixed-method approach is utilized to evaluate the impact of multidisciplinary empathy training (MET) in students. MET was developed by nursing and pharmacy educators and researchers, and this project takes place at Montana State University (MSU) Mark and Robyn Jones College of Nursing, Idaho State University (ISU) College of Pharmacy in Alaska, and University of Mexico (UNM) College of Pharmacy. Nursing and pharmacy students will receive MET during scheduled teaching in undergraduate and graduate, respectively, courses. We anticipate a total of n=150 students receiving the training. After the students receive MET, a subsample of n=8 students will be randomly selected from MSU to participate in qualitative interviews. The Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) is used to measure pre- and post-empathy training. In a subsample of students, the experience of the training and perceived impact are collected using descriptive qualitative methods. A paired t-Test (or nonparametric equivalent) will be employed to analyze JSE-HPS data. Further, qualitative data will be transcribed and a thematically based content analysis will be conducted.

Assessment of Findings: This research is currently inprogress. MET delivery will be completed by October 18, 2022, data collection is expected to be complete by mid-November 2022, and data analysis will be complete by January 2023. We expect an increase in JSE-HPS scores post-MET compared to pre-MET, and we also expect to receive meaningful qualitative feedback on approaches to improve our training.

Conclusions: The work proposed in this project is the first step in learning if MET has an impact on empathy levels in undergraduate nursing and pharmacy students. Formal conclusions will be made upon data analysis completion.

The Wellbeing of Student Veterans: A Pilot Study of the Well Being Inventory

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Purpose: The purpose of this cross-sectional study is to determine the well-being as defined by the Well-being Inventory in Student Veterans attending CU, more specifically this study will identify the educational well-being in Student Veterans.

Background: As more and more Veterans leave the military, they are entering the classroom at a faster rate than ever before. To better understand this emerging population, Student Veterans can be characterized as mostly over 25 years of age, full time students, and undergraduate students. There is little and non-substantial evidence taking an in-depth look at the Student Veteran population, though what literature does exist, suggests student veterans have a unique pathway to academic success. The challenging military background may benefit Student Veterans in the classroom. In fact, military personnel who enter higher education perform better academically than those without a military background, likely due to Student Veteran's intentional enrollment. Though, the social aspect of being a student may be difficult for Student Veterans to navigate as they may feel as if they don't "fit in" or feel lost navigating their new place in society. Furthermore, these violations to one's identity have been linked to adverse mental health disorders. Student Veterans are further challenged because many of them work while in school, posing a financial burden. Moreover, financial troubles may go unresolved as the resources at the institution are lacking the ability to adequately address Student Veteran specific concerns. As a result of the inability to meet Student Veterans' needs, Student Veterans are forced to seek out informal sources of support like their social networks. During military service, veterans can accumulate visible and invisible wounds, complicating their role as students, threatening their health, but most importantly, putting their wellbeing at risk.

Methods: Recruitment and data collection will be conducted via REDcap. Following informational consent student veterans will proceed in completing the Well-Being Inventory (WBI). The WBI has 126 items, there are 4 subscales that measure each domain. Furthermore, each subscale has items specific to measuring status, function, and satisfaction. Our scale of interest is the vocational subscale that has 11 items measuring educational status, function, and satisfaction

Results: Final analysis and results will be completed by March 2023. Based on the previous WBI study in a population of veterans we hypothesize that there will be a higher measure of well-being among veteran students who have only been out of service for one year compared to other student veterans who have been out of service for longer. In addition, we believe that women will have lower well-being scores compared to male student veterans.

Implications: Conduction of this pilot study will allow the research team to determine the baseline of well-being for the current Student Veterans at the University of Colorado. This information is necessary in determining if there is a need in our system for a student wellness program specific to the Veteran population. If it is determined there is a need, we will also be able to gauge what key components the program should include.

Safety-Specific Transformational Leadership in Healthcare: A Concept Derivation

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Title: Safety-Specific Transformational Leadership in healthcare: A concept derivation
Purpose: To lay the foundation to advance the concept of Safety-Specific Transformational Leadership (SSTFL) in healthcare, borrowing the term from other industries where it has been tested and deemed to contribute significantly to improved safety performance and outcomes.
Background: Eliminating preventable medical error continues to be a challenge in healthcare. Research studies have examined the influence of leadership on safety outcomes, yet gaps in knowledge remain and concrete tools for safety-specific leadership development are lacking. Other high-risk industries have much better safety track records than that of the healthcare industry. Transportation, manufacturing, aviation, and nuclear power industries have monitored and studied safety performance and outcomes much longer than healthcare. It is logical to look to more successful industries for effective safety practices that may translate to healthcare through improved processes, practices, and measures. One concept demonstrating significant potential for safety improvement in healthcare is Safety-Specific Transformational Leadership.
Methods: A concept derivation strategy by Walker and Avant was used to examine Safety-Specific Transformational Leadership (SSTFL) within the context of industries where the term has been tested. Following a selective review of safety leadership literature, it was concluded that the concept and its inherent and related behaviors, attributes, and practices held significant potential for improving healthcare safety outcomes. An analysis of the concept's use, meaning, and characteristics, leads to defining the concept for application in the context of healthcare: "Safety-specific Transformational Leadership is an integrative style of leadership as well as a set of competencies and practiced attributes and behaviors. The SSTFL style is identified by an enthusiastic, emotionally mature, visionary and courageous lifelong learner who inspires and motivates safety consciousness, safety culture, and safety performance by informing and empowering colleagues, patients, families, and policy-makers. Competencies essential to the SSTFL include emotional intelligence, communication, collaboration, coaching, mentoring, and integral knowledge of safety science and its implications for practice, education, and research." The concept of SSTFL is highly relevant to the context of healthcare if clearly defined and measurement is enabled. Research from other industries provides a foundation upon which the concept may be advanced and tested.
Conclusions: SSTFL offers opportunity for healthcare practice, education, and research by improving patient safety through leadership development. It is not clear why SSTFL has not gained traction in healthcare, yet one reason may lie with insufficient development of the concept for effective translation to the healthcare industry. Little conceptual work has been done with SSTFL in any industry or context. A significant gap in the literature is the lack of an explicit operational definition of the term. Important next steps include the development of concrete tools for assessing and measuring behavioral manifestations of the SSTFL competency.

Leveraging Resources in Nursing Schools with Distance Learning Partners

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Purpose/Aims: To describe a distance learning education (DE) consortium that increases the capacity of doctoral education through a wide breadth of course offerings, facilitating timely student progression and providing course savings and additional tuition income opportunities for participating Schools of Nursing.

Rationale/Background: Courses taught via DE due to the Covid-19 pandemic allowed universities to maintain social distancing, stabilize enrollments, and provide greater educational flexibility for students. In 2020-21 the unduplicated enrollment count for graduate students in DE showed a more than doubling (81.9%) of the participation rate from the fall of 2018. Moreover, budgets are tight at many universities, with faculty vacancies remaining challenging to fill, particularly those positions at the Ph.D. level, with 84.4% of vacancies required or preferring a doctoral degree. Graduate schools offering the Ph.D. are costly to run, with revenue areas often unable to cover the program's expenses.

Description: The Nursing Education Xchange (NEXus) is the only course-sharing consortium existing via distance learning, focusing on nursing graduate students and emphasizing doctoral studies. NEXus has expanded from four to 16 university partners, from four to 15 areas of study/clusters, and from 25 courses to 250 offerings annually. Participating universities save faculty salaries and course development time by having their students take advantage of courses available through the exchange rather than creating and staffing these courses themselves.

Methods: Evaluation of course effectiveness includes student and faculty evaluations of course quality and satisfaction, NEXus exchange enrollment and graduation data, and institutional income and cost savings analysis.

Assessments/Outcomes: From 2006 to 2022, graduate nursing students registered for 1,150-course seats. Ninety-six percent of students reported NEXus courses facilitated remaining on time in program progression, with 85% reporting their home institution did not offer the chosen course. Students were very satisfied (4.12/5.0 effectiveness) with course quality and meeting their learning needs. As of 2021, 440 graduates earning Ph.D. and DNP degrees from participating NEXus schools have taken a NEXus course. In 2021-22, participating universities realized an average of $84,500 in course savings and income.

Conclusions: When distance education has become the norm, shrinking resources and faculty pools in nursing education provide additional impetus for partnership and collaboration efforts. NEXus fulfills individual institutional needs and the profession's larger goals defined by the American Association of Colleges of Nursing. These goals are a) assisting in identifying tracks or minor courses for students that support knowledge and skills development, b) encouraging greater flexibility in curricular offerings to increase access, c) decreasing financial challenges, and d) enhancing opportunities supporting both full and part-time study, with a focus on timely degree completion.

Modeling Effective Co-Teaching: Perspectives of a Novice and Expert Nurse Educator

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Purposes/Aims: The purpose of this project was four-fold. First, the project aimed to mentor an expert nurse leader into the clinical faculty role. Second, the project aimed to promote class engagement and teaching excellence in a larger classroom environment. Third, the project intended to develop and execute an effective Nursing Leadership and Management course for pre-licensure baccalaureate nursing students. Lastly, the project was designed to support staff and faculty satisfaction.

Rationale/Background: Challenges in recruiting and retaining nursing faculty is not a new issue. This issue continues to be linked as a barrier to increasing nursing program enrollment nationally. Quality mentoring programs, however, have been correlated to improved job satisfaction for both the mentor and the mentee. Concurrently, there is a nationwide call to reframe nursing education to promote effective learning.

In response to the nursing shortage, our program enrollment increased by 25%. This required a shift in workload and class size and necessitated onboarding additional faculty, many of which did not have prior teaching experience. Novice and experienced faculty were paired together to co-teach the larger classes creating an organic mentoring milieu.

Brief Description of the Undertaking/Best Practice: Benner's Model Novice to Expert was used as a framework for skill development during our planning process. Prior to the first day of class, instructors met and discussed philosophy of teaching, adult learning principles, reviewed course materials, and created an action plan. While in session, we utilized a Plan, Do, Study, Assess approach to our teaching and met weekly before class to finalize course preparation. After class, we debriefed teaching methodology, assignments, student engagement, and made notes for future courses.

Assessment of Findings/Outcomes Achieved: The standard university course evaluations were deployed and used to gauge student satisfaction. The standard course evaluations use a 1-5 rating scale where 1 indicates strongly disagree and 5 strongly agree. Three examples of questions are: 1) The course was instructed in a skillful and effective manner (Rating 4.74), 2) The instructor made relevant connections between course content and practical application (Rating 4.79), and 3) Encourages me to do my best work (Rating 4.84). Written comments from students were also optional and reflected a benefit in the co-teaching model.

Faculty satisfaction was obtained through the weekly preparatory and debriefing sessions. Both faculty shared overall satisfaction with the process of collaborating together, teaching effectiveness, and burden of coursework.

Conclusions: Co-teaching is an effective strategy to increase expertise in the classroom, support new faculty, and engage students. Co-teaching can be a component of a mentorship relationship, as well. Cultivating an environment of mutual respect, effective communication, and shared decision making is a key component of mentoring and co-teaching. Student and faculty satisfaction can flourish in this structure.

Evidence-Based New Clinical Instructor Orientation

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Purpose/Aims: The purpose of this project is to address a gap in teaching knowledge of new clinical instructors at the university by developing a new clinical instructor orientation course.
Aim 1: Survey the literature for new clinical instructor orientation interventions and content
Aim 2: Develop an evidence-based orientation course for new clinical instructors

Rationale/Background: The orientation of new clinical instructors to their role and the complexities of teaching and learning has been identified as a need at the university. Clinical instruction is challenging, and most new clinical instructors have a limited background in teaching students in an academic setting. An orientation is essential to prepare clinical instructors to translate content, evaluate students, and teach high quality patient care.

Brief Description of the Undertaking: Credible sources from peer-reviewed publications in the nursing and education fields within the past ten years were reviewed that discussed teaching, orientation, and role of new instructors. Best practices will be integrated into the development of online educational orientation modules.

Outcomes: The identification of content that aligns with best practice and the development of online modules are solutions for the lack of new clinical instructor orientation. Three online orientation modules will be developed to cover 1) role and responsibilities, 2) student learning and curriculum driven clinical experience, and 3) evaluation, feedback, and student issues.

Conclusions: A new clinical instructor orientation course is significant for the clinical instructors, their students, and patient safety. Orientations provide new instructors with foundational knowledge about teaching, including how to guide students to translate classroom-based knowledge into the safe and effective care of patients. Student learning will be enhanced by clinical instructors who are able to provide effective evaluation and feedback. Furthermore, the new faculty may experience a smoother transition to their role as an educator and be less likely to become overwhelmed and resign (Cox et al., 2021). Future research is warranted on the impact of the orientation related to increased knowledge for new faculty.

References
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Objective Ambulance Diversion Protocol Using the NEDOCS

***Tiffany K. Nielsen**, DNP, APRN, FNP-C, ENP-C, School of Nursing, University of California, Irvine, CA*

Ambulance diversion (AD) is often an undesirable necessity when the emergency department (ED) no longer has sufficient resources to safely care for additional patients. Weiss et al. (2004) developed a validated tool entitled the National Emergency Department Overcrowding Score (NEDOCS), to measure the severity of ED overcrowding in real-time. The NEDOCS is the most widely used tool for use in moderate to high-volume academic EDs (Wang et al., 2014) and most frequently cited in current literature to measure ED crowding (Sartini et al., 2022). It has been found to be significantly correlated with ambulance diversion (AD) rates ($p < 0.01$) (Weiss et al., 2004) and suggested in various forums to be used to direct and regulate AD practices (Wang et al., 2014). This Quality Improvement Project aimed to utilize the NEDOCS to provide real-time, objective crowding data to inform AD decisions. Simulation of an AD protocol informed by the NEDOCS was found to significantly reduce AD times and appropriately redistribute AD during periods when the ED was severely and dangerously overcrowded.

Objectives: Utilize the National Emergency Department Overcrowding Score (NEDOCS) in an academic emergency department (ED) to create an objective ambulance diversion (AD) protocol and analyze variations in AD rates between usual care and simulation of the NEDOCS AD protocol.

Methods: The project took place in an academic ED with a yearly patient census of 80,000. The NEDOCS was implemented in the electronic medical record system and crowding scores were calculated every 30 minutes over a 2-month period. A total of 2,923 scores were collected for analysis. Ambulance diversion rates were analyzed and correlated with a NEDOCS score at the time of each AD activation. The NEDOCS was used to develop an AD protocol and the protocol was simulated using the same 2-month dataset to determine its effects on time spent on AD compared to current practices.

Results: The ED was found to be dangerously or disastrously overcrowded almost a quarter of the time (22.8%). Multiple regression revealed crowding severity was significantly correlated to time spent on AD. A paired samples t-test demonstrated a statistically significant reduction in time on AD (26.8 minutes/day) with simulation of the AD protocol compared to current AD practices.

Conclusions: The NEDOCS was found to be significantly correlated with AD rates and is recommended to guide AD practices. The AD protocol simulation demonstrated successful reduction in time on AD. Implementation of the protocol is endorsed to reduce time spent on AD, improve resource utilization, and promote patient safety, ensuring AD is activated during severely and dangerously crowded conditions and is avoided when the ED is not overcrowded.

Increasing Student Practice Readiness: Closing the Academic-Practice Gap

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Purpose: In Maricopa County, Arizona a pilot was conducted to increase the practice readiness of new graduate nurses (NGN). This project partnered three nursing schools and six healthcare organizations to train preceptors who work with senior nursing students (SNS) during their preceptorship. The pilot is intended as a model for how communities can support preceptors and close the academic-practice gap with a seamless transition of NGN into practice. Objectives for this pilot are to increase preceptor resilience, self-efficacy, and satisfaction using an enhanced training program. Another objective is to explore SNS progress during the final clinical rotation using a validated tool.

Background: Safe practice of NGN requires collaboration between academic institutions and hiring organizations with renewed commitment to close the academic-practice gap. Current evidence shows a worsening academic-practice gap with less than 10% of NGN demonstrating safe practice. Disparities in clinical training hours between programs and degree types contribute to inconsistent preparation among NGN. Preceptors play a critical role in practice readiness. Retention of experienced preceptors and reduced preceptor stress is related to organizational support and training.

Brief Description: Preceptors received enhanced training using self-paced online modules and problem-based learning prior to working with SNS. Preceptors (n=60) completed the preceptor self-efficacy questionnaire (PSEQ) and Connor-Davidson Resilience 10 item (CD-RISC 10) at baseline and following training. Preceptors will complete the PSEQ and CD-RISC 10 again after 12 weekly teaching tips. SNS (n=53) were assigned to four acute care settings and three community settings during their preceptorship. The dyads used the Readiness-to-Practice Indicators (RPIs) to set daily goals. RPIs are an evidence-based evaluation tool that outlines the skills necessary for independent practice.

Outcomes: Paired t-tests were used to evaluate preliminary preceptor data. A significant change in preceptor self-efficacy ($p<.05$) was seen from baseline to after training (M=71.6 to 74). There was a non-significant rise in resilience ($p>0.1$) from 32.9 at baseline to 33.4 after training. Repeated measures ANOVA will be used to evaluate measures after 12 weeks of resilience and teaching tips.

A small group (n=7) of preceptor/student dyads completed the preceptorship. Remaining dyads are in progress. Preceptors documented nearly every shift or after shifts 4, 8 and 12 as designed. Four preceptors utilized the platform as intended by documenting regular check-ins, establishing clear goals, and providing feedback to students. Students performed as expected with 85% in progress or validated on RPIs like professional accountability and assessment.

Conclusion: Academia and hospitals want the same outcomes: safe, practice-ready nurses. The RPIs can be used to evaluate practice readiness of SNS and NGN by both. Closing the academic-practice gap with transition to practice programs requires thoughtful and actionable collaboration with consideration of using mutual evaluation tools. Nurse leaders and preceptors report that preceptor training is robust and that the RPIs provide organization to progression of a student through the preceptorship. Preceptor and student final outcomes will be evaluated when the pilot is complete.

Funding: Maricopa County Board of Supervisors

That’s the Ticket: Adapting Program Evaluation into Continuous Quality Improvement

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Purpose: The purpose of the project was to create a systematic, comprehensive, and sustainable approach to program evaluation that transforms accreditation preparation into a continuous quality improvement effort.

Background: Nursing education programs are dynamic structures that require on-going evaluative input to determine and maintain program effectiveness, quality, and relevance. Commission on Collegiate Nursing Education (CCNE, 2018) accreditation and State Board of Nursing approval requires nursing programs demonstrate effectiveness in achieving their mission, goals and expected outcomes through a systematic process of ongoing data collection and analysis that is used for ongoing program improvement. A review of previous program evaluation practices revealed a static plan with limited utility that was ripe for process improvement.

Brief Description: The CDC’s Framework for Program Evaluation (2015) is adapted to establish a nursing program accreditation Master Evaluation Plan (MEP) grounded in the standards of utility, feasibility, propriety, accuracy, and overall evaluation accountability. The comprehensive MEP, framed around the CCNE standards, guides the timing, stakeholders, level of achievement, methods, potential evidence, aggregate results, and analysis for nursing education program evaluation and ongoing improvement.

Outcomes: The outcome is the creation of a dynamic Master Evaluation Plan that captures historic data collection, analysis, and the data-driven decision-making of the College. A unique ticket system chronicles the detailed capture of these data and subsequent program decisions. The MEP not only supports the program’s process improvement effort but provides an accurate account for future accreditation reports and site visits.

Conclusions: Plans for nursing program evaluation of effectiveness are often criticized as being created for accreditation and then put on a shelf. This project demonstrates an efficient and intentional design to transform program evaluation into continuous quality improvement in pursuit of academic excellence. The MEP, paired with a conscious commitment of the resources necessary to implement the plan, illustrates promising results for best practices around program effectiveness and determining the accuracy and reliability of the accreditation process.

LEADERSHIP / ADMINISTRATIVE ISSUES

Nurses' Job Outcomes Related to COVID-19

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Aims: The purpose of this study was to examine factors contributing to registered nurses (RNs') inability to work or look for work in the early phase of the COVID-19 pandemic, with specific attention to nurses who identify as Black, Indigenous, or People of Color (BIPOC).

Background: At the onset of the pandemic, some RNs experienced workplace closures necessitating transition to remote work, furlough, or layoff, while others continued working in acute or residential settings with increased patient loads and high exposure to COVID-19. Job outcomes differed for BIPOC workers. Outside of healthcare, BIPOC workers experienced higher rates of job loss, while inside healthcare, BIPOC RNs were more likely to experience inadequate access to personal protective equipment, higher exposure to COVID, and other negative work environments. These factors may have compounded the existing disparate rates of negative job outcomes in BIPOC RNs. Investigating the job outcomes of BIPOC RNs throughout the pandemic is critical to identifying how structural racism continues to affect this critical workforce. This study aimed to examine the impact of COVID-19 on RNs by describing relationships between job outcomes--defined as difficulty finding a job or inability to work due to COVID-19--and other personal and workplace factors.

Methods: This study used a retrospective secondary analysis of data from the Current Population Survey to examine RNs and COVID-19-related job outcomes in May-December 2020 (N=3782). Using logistic regression, a series of models were developed and tested to examine the relationships between RN characteristics such as race, sex, family situation, or work setting and job outcomes related to COVID-19.

Findings: Study results indicate that race was not a significant predictor of COVID-19-related job impacts, nor did gender significantly impact outcomes. The odds of a negative impact were increased by age (1.5% per year over age 20, $p < .05$), presence of a child under 18 years old in the home (43%, $p < .01$), no spouse present (36%, $p < .01$), or working in an outpatient setting (48%, $p < .001$).

Conclusions: Although the lack of significant association between race, gender, and outcomes was unexpected, findings point to the necessity of further examination of work and life circumstances that lead to different job outcomes. These contextual factors affect RNs in dynamic ways and cannot adequately be represented as static concepts. Instead of solely examining individual or organizational characteristics, RN job decisions needs to be understood in the context of systemic issues that impact individuals; one example would be to examine how geographic location impacts which work settings are available to BIPOC RNs and how external factors such as family resources in those areas impacts their job decisions. To better understand BIPOC RN job outcomes (and RN job outcomes in general) throughout the pandemic era, the initial impacts represented in this study should be compared with RN job data from later months and years. Examination of the ongoing impacts on RNs will facilitate improved support mechanisms for nurses and elimination of racist policies and practices in the nursing workplace.

LEADERSHIP / ADMINISTRATIVE ISSUES

Enhance to Advance: An Updated Framework for Nursing Workforce Research

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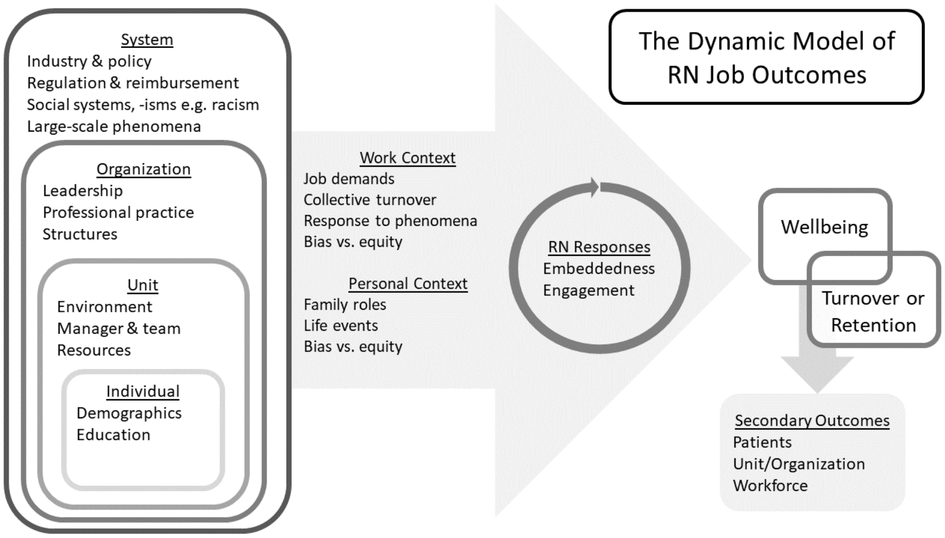
Purpose: The purpose of this project was to propose a model that allows for the comprehensive examination of holistic outcomes for registered nurses (RNs), with the goal of facilitating more robust examination of factors affecting RN job outcomes and identifying targeted areas for intervention.

Description of Concepts and Method: In the peri-pandemic era, issues in nursing such as burnout, exhaustion, turnover, and attrition from the profession gained national attention and led to increasing concerns about the sustainability of this vital workforce. It is imperative that research and practice are guided by a comprehensive model that allows for the inclusion of systems elements, personal and workplace contexts, and the RN's own responses to their situation, as well as guiding development and evaluation of interventions to support RNs. Likewise, working toward equity in the workforce requires the ability to identify and examine systems and organizational factors that benefit one group of RNs (i.e., white, heterosexual, non-disabled) over another. The proposed model was designed to provide structure that accommodates the multiple data sources and concepts that have been used to describe turnover in RNs and the general workforce, assists in moving toward equity, and affords the opportunity for closer examination of RN wellbeing in the context of job decision-making. The model includes antecedents which are filtered through the dynamic contexts in which RNs live and work. These antecedents and context then lead to RN responses, which point to the two linked outcomes of wellbeing and turnover or retention.

Linkage between Model and Research: The model incorporates key concepts in existing RN turnover research, but also adds a systems level that acknowledges the influence of society and politics on an individual's experience. Additionally, it builds on models using critical concepts such as an RN's response to workplace characteristics and the importance of mediating factors such as organizational commitment. The model highlights the work and life contexts of RNs as dynamic elements that directly influence RN responses to situations at a given time. Using time and context in the model follows recommendations from organizational behavior research, which also provides theories of turnover that address the processes and contexts that influence job decisions at different points in time. The structure and concepts in the model have been reinforced by recent frameworks and publications focused on wellbeing and equity in the health workforce.

Conclusion: The experience of the pandemic has led to changing needs and an increased urgency to address RN job outcomes, wellbeing, and equity; this work requires current concepts and frameworks, accurate and replicable measurement of variables, and attention to situational contexts. The proposed model can accommodate diverse types of data and concepts, and provides opportunities for exploring and understanding conceptual relationships more deeply. Widespread impacts to the RN workforce have created a need for transparent strategies and clear data, with a focus not just on the good of organizations, but on health and equity for individual RNs and the sustainability of a diverse nursing workforce.



LEADERSHIP / ADMINISTRATIVE ISSUES

Mentorship Model in Newly Promoted Middle Management Nurse Leaders

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Purpose/Background: Middle management nurse leaders (MMNL) are positioned to impact the nursing culture of the units they manage. The development of MMNL is dependent on the mentorship they receive. Unfortunately, this level of nursing has not been prioritized as these are inconsistencies in leadership training and succession planning. MMNL report inadequate preparation, high stress, low job satisfaction, and turnover, all of which directly impact unit culture and patient outcomes. This negativity can be attributed to the lack of investment in the development of these key nurses, through adequate mentorship. An aggregate of the Cognitive Apprenticeship (CA) and Swanson’s Theory of Caring will be used as a mechanism to explore the relationship between a nursing mentorship model and the challenges MMNL face.

Definition of Concepts: Mentorship is poorly defined in the nursing profession and often misinterpreted. In the context of developing a new MMNL model, mentorship will be defined as a voluntary, reciprocal, intellectual partnership between novice MMNL and experienced nurse leaders where personal and professional growth opportunities will be explored through dialogue and caring relationships. CA, developed and refined by psychologist Vygotsky and scientists Collins, Brown, and Holum, is based on the principles of social constructivism and is applicable for use in studying the enculturation of novice MMNL into the working environment. Swanson’s Theory of Caring is based on a person’s well-being achieved through five basic processes “knowing, being with, doing for, enabling, and maintaining belief”.

Internal Consistency of Concepts/Theories: The dimensions of CA include the content that will be shared between mentor and mentee; the method to which that content will be facilitated and sequenced of topic complexity, and the sociology of practice. CA will utilize these dimensions to build on previous knowledge and create an environment that builds new leadership. Swanson’s five processes of caring, will be translated and refocused to the MMNL, thus developing a holistic mentorship model. They include: “knowing” another’s experience; “being with” and supporting, “doing for” as a gatekeeper, “enable” growth and development, and “maintaining belief” during challenges. Within the context of CA, the Theory of Caring will enable the establishment of a genuine relationship between the experienced professional and novice MMNL. Both models will be analyzed and integrated using foundational principles and philosophies.

Logic Linking to Research Problem: MMNL report inadequate preparation for their role and are shown to experience low satisfaction and turnover. MMNL have dual function as facilitators of organizational strategic plans, as well as holding a vital position in the development and creation of the working environment and nursing culture in the units under their supervision, all which impact patient outcomes and nursing staff.

Conclusion: The challenges that the nursing profession faces requires the development of a theoretical model that values the caring relationships that are needed to mentor the next generation of nurse leaders. These relationships will provide the platform for experienced nurse leaders and novice MMNL to engage in a caring relationship with a CA approach where lessons, philosophies, and ways of thinking can be developed and shared.

A Model of Opportunities for Empathy in Undergraduate Nursing Education

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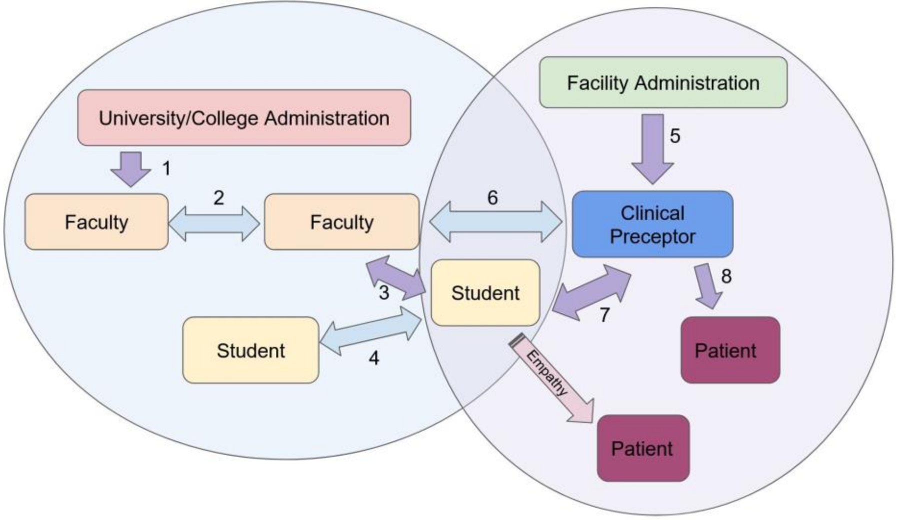
Purpose: Incivility, racism, lateral violence. These are not words some may initially use when describing nursing education. However, the literature shows that faculty, staff, students, and clinical preceptors have described nursing education using those three descriptors in addition to relaying other negative experiences. Empathy has been related to not only better patient satisfaction and possible clinical outcomes, but also to the reduction in staff burnout and compassion fatigue. The purpose of this presentation is to introduce the Opportunities for Empathy in Undergraduate Nursing Education (OEUNE) model.

Description of Model: The OEUNE model is based on Chinn and Falk-Rafaels's *Critical Caring Pedagogy* and built by reviewing and synthesizing current literature on nursing empathy and incivility with that critical lens. In this model, empathy is defined as being aware of and responsive to the feelings, thoughts, and experiences of others in the undergraduate nursing educational context without having the same feelings, thoughts, and experiences. The OEUNE model focuses on the overlapping educational contexts of academic and clinical settings that contribute to student learning and eventually empathetic nursing practice. There are eight *relationships* that serve as the opportunities for empathy. Four relationships exist in the academic setting stemming from administration through student to student interactions. Three relationships exist in the clinical setting, also stemming from administration through preceptors *modeling* nursing practice during the student's clinical experiences. The final relationship spans the two settings and involves the academic faculty and clinical preceptors. The relationships occur as either lateral or *hierarchical* and the opportunity to empathize may be single or bidirectional. **Link to Practice and Research:** This model highlights both academic and clinical practice opportunities for building empathy. In education, the focus should not only be teaching students about empathy, but demonstrating and encouraging empathy across all relationships. Additionally, an empathetic teaching and learning environment could positively impact faculty, staff, and students' experiences and satisfaction. For the clinical setting, increasing empathy across these relationships may change the culture towards becoming learning environments where questions are encouraged, innovation is sought out, and all staff members feel valued in their positions. This has the potential to increase safety and patient and staff satisfaction, as well as improving patient outcomes through empathetic care. This model has yet to be tested, the concepts within each relationship yet to be fully defined. Future research can bring further insights or identify areas for model revision in addition to development of measurement tools for the various relationships. This work is ideal for clinical-academic partnerships.

Conclusion: The OEUNE model offers a framework for understanding where opportunities for empathy exist in the nursing education context. Both the academic and clinical settings can benefit from knowledge and application of empathy. This presentation introduces the module, however future research is needed for model fit and measurement in order for the model to be applied to academic and clinical practice.



LEADERSHIP / ADMINISTRATIVE ISSUES

Theory Analysis and Integration: Creating a Multi-System Nurse Retention Framework

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Purpose: The purpose of this presentation is to examine Ray's bureaucratic caring theory and Bronfenbrenner's ecological systems theory using Walker and Avant's strategy for theory analysis and integrate these theories to develop a new conceptual framework suitable for the study of nurse retention.

Description of Theories: Ray's Bureaucratic Caring Theory (BCT) exemplifies the concept of caring within a complex healthcare organization. In 1981, Marilyn Ray developed the BCT through ethnographic and grounded theory research methods. She interviewed over 200 healthcare providers in an acute care hospital. Each participant was asked, "what is the meaning of caring to you?" Her research initially uncovered a substantive theory of differential caring, demonstrating that the meaning of caring differed among areas and hospital units. Upon further analysis and dialectical synthesis, the formal theory of bureaucratic caring emerged. The BCT highlights the interplay between organizational structures and caring. This theory may provide further insight into nurse retention within complex healthcare organizations.

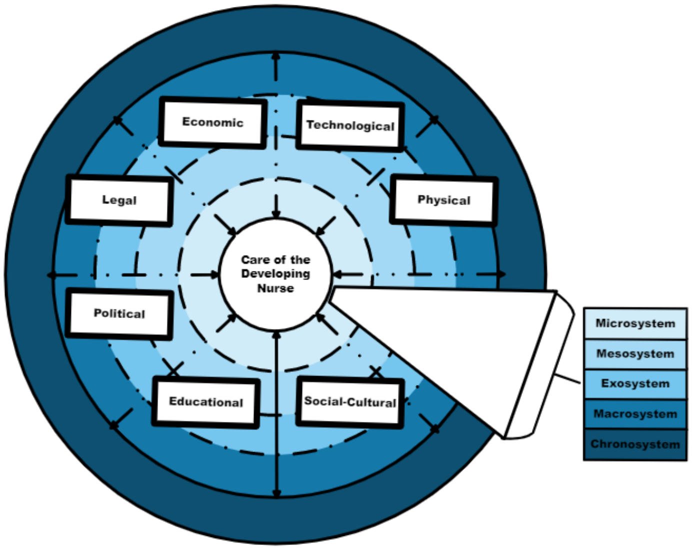
Bronfenbrenner's Ecological Systems Theory (EST) describes human development as being influenced by the individual and multiple systems of the person's environment. Urie Bronfenbrenner's theory of human development originated in the 1970s. It evolved into various versions throughout his life. This analysis concentrates on Bronfenbrenner's early work that illustrates the multiple systems within a developing person's environment. Nurses and other healthcare professionals have adapted the EST to various phenomena, while the EST has not been adapted to the construct of nurse retention. Research and analysis of nurse retention through the lens of EST may identify new influencing factors of the individual and the environment within and beyond the healthcare organization.

Collectively, these two theories produce a new representation of nurse retention. Ray's BCT provides the structure to the healthcare environment and incorporates the concept of caring. While the EST specifies that the developing person has multiple systems of environmental influences, similar to the nurse continuously developing within the healthcare environment. The bases of these theories formulate the nurse retention framework (Figure 1).

Linking Theory to Research: Nurse retention produces desirable outcomes for nurses, patients, and organizations, including job satisfaction, decreased adverse outcomes, and cost savings. Research on nurse retention has been studied for decades, yet nurse turnover remains a common problem. Therefore, a new theoretical approach is warranted.

The nurse retention framework and concepts were adapted from the BCT and EST. The new model depicts the developing nurse as having reciprocal connections with the systems and throughout the structure of the healthcare organization. These connections influence the nurses' choice to stay or leave their job or profession.

Conclusion: Through theory analyses and integration, the nurse retention framework emerged. This theoretical framework provides a multi-system level approach for understanding, researching, and influencing nurse retention. Additionally, the framework highlights future consideration of variables within specific dimensions or levels of the healthcare system through qualitative, quantitative, and mixed-methods research. While earlier research has emphasized the nursing work environment, we recommend expanding the environment toward higher-level systems for future research to identify other factors influencing nurse retention.



Is the Synergy Model Designed to Capture Patient Acuity and Guide Staffing Decisions?

Catherine M. Harpst*, RN, MSN, ACNS-BC, CCNS, College of Nursing, University of Arizona, Tucson, AZ*

Purpose/Aim: To critique the Synergy Model for Patient Care and its ability to be translated to a psychometrically valid instrument that captures patient acuity, guides staffing decisions, and facilitates measurable outcome improvements in patient, nursing, and system clinical spheres.

Theory Description: The Synergy Model for Patient Care was developed by Martha Curley and the American Association of Critical Care Nurses (AACN) and adopted by the AACN Certification Corporation in 1999 to provide a framework for critical care certification. The model identifies eight patient characteristics and eight nursing competencies that describe patient qualities and nursing knowledge and practice. The model states that when patient characteristics match nursing competencies, patient and system outcomes are optimized. The model has been diversely applied as a framework for critical care and advanced practice nursing job analysis, professional practice models, system care delivery redesign, bedside education, and acuity system development. Notably absent from the literature is evidence that psychometrically valid and reliable instruments have been developed to demonstrate that Synergy Model implementation improves patient, nursing, or system outcomes.

Internal Consistency: The Synergy Model demonstrates internal consistency. Its assumptions logically support the theory's over-arching tenets and constructs. The constructs, the patient characteristics and nurse competencies, are thoroughly described and measured using a rating system of 1-5 with 1 corresponding to higher-risk patient characteristics and 5 corresponding to expert nursing competencies. These characteristics and competencies, though well-defined, have yet to be measured using psychometrically valid and reliable instruments.

Theory to Practice: The Synergy Model is a holistic theory. Its theoretical assumptions and descriptions of patient characteristics and nursing competencies are universal to nursing. Researchers have attempted to measure the model's patient characteristics to guide staffing decisions. Most studies utilized the eight patient characteristics as measurement domains with expert nurses contributing descriptive statements that depict escalating patterns of complexity within the domains. Many measurement tools were created by consensus with varying degree of psychometric validation. Most notably, construct validity of these tools was not sufficiently measured, or when measured, presented challenges to the overall validity of the tool. To date, studies have utilized the Synergy Model's patient characteristics as written or as guiding frameworks to develop specialty-based acuity models. The most psychometrically valid version of patient characteristics originates from the model as written. Even though the model as conceived shows promise for practice translation, no study has fully implemented a psychometrically valid patient characteristics measurement that guides acuity-based staffing decisions.

Conclusion: The Synergy Model describes critical care nursing and the broad interaction amongst nursing competencies and patient characteristics at the profession level. Patient characteristics, as introduced and scored in the Synergy Model may translate to a valid and reliable tool to measure patient acuity and guide staffing decisions. A psychometrically valid instrument that guides acute and critically ill staffing decisions is needed, especially one that demonstrates improvement in patient, nurse, and system outcomes.

Self-Care Practices from Nurse Managers' Perspective: A Concept Analysis

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Background: Nurse Managers (NMs) are vulnerable to leaving the profession due to dissatisfaction from mounting on-the-job pressures, and perhaps unknowingly lack the practices of self-care. There is a gap in the literature where the practice of self-care has not been addressed on behalf of Nurse Managers.

Purpose: The purpose is to clarify the concept self-care from the underpinning of Watson's Theory of Human Caring among nurse managers by uncovering and critically evaluating literature on this concept using the Evolutionary Method.

Methods: Rodgers and Knafl's (2000) Evolutionary Method concept analysis approach was applied. The targeted timeframe was 2010-2022. Domains examined were nursing and psychology. An application of these domains expanded opportunities for favorable references.

Results: Results of this concept analysis revealed that the concept of self-care was complex and not well identified in the literature. Themes of findings were categorized into the guiding principles: antecedents, temporal variation, socio-culture and consequences to further explain this concept. Themes were examined by frequency, then further broken down into guiding principles into subcategories and re-examined specifically for self-caring. This analysis demonstrated only human caring existed only 2% of the time. Exemplars for nurse managers were not found, but a like study was referenced to examine caring behaviors among nurses and nursing assistants. Similar finding was present to further confirm the established themes. Interpreting Results is a dynamic process as several literature reviews needed to uncovered new references and examine changes in thinking between the guiding principles over time. Most importantly, examining contrary points of view on caring and non-caring was critical to further explain this concept.

The Emotional Freedom Techniques and Postpartum Depression and Anxiety

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Background: Postpartum Depression (PPD) affects nearly 1 in 5 women in the first twelve months following childbirth. Untreated PPD can have severe implications if not addressed, including maternal suicide and infanticide. Treatment is essential as current research indicates that the Covid-19 pandemic has significantly worsened symptoms of PPD in this population. Evidence-based non-pharmacological interventions that can be easily utilized are needed to support mothers' emotional health and well-being. One such intervention is the Emotional Freedom Techniques (EFT). This intervention combines Cognitive Behavioral Therapy (CBT), self-acceptance, and the self-tapping of acupressure points. It is an evidence-based intervention that has been shown to decrease various mental health symptoms, including depression and anxiety.

Purpose: This quality improvement (QI) project examines the effect of EFT on depression and anxiety symptoms in postpartum mothers.

Methods: This project will take place at a women's health and lactation clinic located in Washington from September 2022 to December 2022. The primary intervention will involve using the Association for Comprehensive Energy Psychology (ACEP) EFT guidelines to guide eight 1-hour group sessions over four weeks. Stephen Porges's Polyvagal Theory will be used to guide project implementation and Donabedian's Model of Change will be used to provide structure for evaluating the effectiveness of implementation. A quasi-experimental repeated measures longitudinal design will be utilized. Descriptive statistics will include demographic data collected from a Qualtrics survey, the clinic intake form, and the clinic's electronic medical record. The pre-and post- post- scores of the Edinburgh Postnatal Depression Scale (EPDS) and the Generalized Anxiety Disorder-7 (GAD-7) will be compared using a repeated-measures analysis of variance (ANOVA).

Outcomes: It is hypothesized that EFT will decrease depression and anxiety symptoms in postpartum mothers. Findings from this project will provide support for the use of EFT as a viable non-pharmacological intervention for PPD and provide valuable information regarding the efficacy of EFT as a means of addressing depression and anxiety in postpartum mothers. Completion of data collection and analysis is expected by March 2023.

Conclusions: Throughout the literature, there appears to be a gap in the use of non-pharmacological interventions in those with PPD. As a clinician, identifying what evidence-based interventions are available and then offering them may have important implications for the mother reluctant to start antidepressant medication. Additionally, findings from this project will provide valuable information regarding the efficacy of implementing EFT as a means of improving postpartum depressive and anxiety symptoms in women in the clinical setting.

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Improving Prenatal Care in an Underserved Population

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Maternal mortality and morbidity are an increasing problem globally and have continued to increase in the United States. Early entry to prenatal care before the 12th week of pregnancy has been identified as an effective strategy for addressing this maternal health crisis. Most maternal deaths and poor pregnancy outcomes are preventable by identifying and managing risks, increasing access to care, educating mothers and providers regarding their pregnancy, and providing consistent prenatal care. Targeting individual communities and care settings with interventions that are respectful, equitable, and based on quality can increase awareness while decreasing the incidence of harm to mothers and babies. A pilot study was conducted in a small federally qualified healthcare center to assess barriers to prenatal care with the addition of an evening hours prenatal clinic to increase access to care. Barriers to accessing care were identified utilizing a survey. In total, 38 pregnant patients opened the survey, with only 17 completing or partially completing it. Barriers to prenatal care in this population were identified to include limited finances, lack of transportation, lack of insurance, non-documented status, and access to care. Fear of legal status has been anecdotally identified as a possible barrier to providing information on surveys and will be explored further. An evening-hours clinic for prenatal and pediatric care was implemented. It will be further evaluated six months after implementation for impact on early entry to prenatal care, health disparities, barriers to care, solutions to barriers, and patient satisfaction.

Keywords: pregnant women, early entry to prenatal care, underserved, prenatal care, maternal mortality, maternal morbidity

Partnering with Guatemalan Lay Midwives to Improve Neonate Outcomes

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Aim: The overarching purpose of this quality project reduce neonatal mortality and improve neonatal survival in San Raymundo area of Guatemala. Specifically, we aim to implement neonatal resuscitation training to increase the knowledge and competence of low literacy comadronas (lay midwives) who deliver babies in the home.

Rationale/Background: The Infant Mortality Rate (IMR) in Guatemala was the 20th highest in the world at 18 deaths/1,000 live births in 2020. About one million newborns die within the first 24 hours including from birth asphyxia or lack of breathing at birth. Nearly 5-10% of neonates require help breathing and 3-5% of those require further resuscitation. Many women in Guatemala prefer to birth at home with comadronas who are not trained in basic neonatal resuscitation strategies. Improving comadronas' ability to assess neonates' transition to extrauterine life and provide basic resuscitation for struggling neonates, and transfer to hospitals may help curb the IMR in Guatemala. This aligns with *Every Newborn Action Plan* launched in 2014. Prior to the onset of the Covid-19 pandemic, comadronas In the San Raymundo area requested neonatal resuscitation training.

Framework: We approached this project using a framework of cultural humility, that is, openness, self-awareness, egoless, supportive interactions, and self-reflection and critique.[6]

Methods: A focus group using a semi-structured interview format comadronas (n=12) was conducted and audio recorded using a digital audio recorder. Participant characteristics were obtained through a paper survey. Pre-and post-intervention tests were administered. Interpreters were used for focus groups and helping those with the survey who could not write and/or read, and for education intervention.

Intervention: Neonatal resuscitation training using *Helping Babies Breathe* curriculum, and focusing on the *Golden Minute* was conducted. Positive pressure ventilation (PPV) using a bag valve mask was taught with return demonstrations. Importantly, the intervention was adapted (using the cultural humility framework) to meet the needs of the comadronas based on the results of the pre-test and focus groups.

Findings/Outcomes: Comadronas reported their ability to carry out newborn assessments; however, knowledge gaps were identified for basic resuscitative strategies. For example, the use of PPV was confusing even though some comadronas had an ambu bag available. The need for increased education, which is provided by the ministry of health (MOH) nurses, to enhance competence for effective utilization neonatal resuscitation was expressed. This included hands-on practice to build competency. Comadronas felt a good relationship existed with bomberos (firefighters) and were comfortable contacting them for transportation to the hospital from the village when the need arose. Interestingly, fear was expressed regarding the loss of mother and/or baby under the comadronas care.

Conclusions: Frequent and regular neonatal resuscitation training and return demonstrations, including use of PPV with bag-valve mask is critical to increase and maintain comadronas competency and confidence in caring for struggling neonates. Respectful partnerships with bomberos and the MOH nurse educators are important for the comadronas success and improved neonatal outcomes. Our next steps include follow up training in August 2023 and facilitating relationships with MOH educators for sustainability.

Maternal Neonatal Morbidity; Race, Ethnicity, Birth Location in Washington 2010-2016

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Background: The United States continues to experience an alarming rise in maternal and neonatal mortality and morbidity, particularly among minoritized racial and ethnic groups. Community (e.g., home or birth center) births have become more prevalent, with some studies showing that planned community births may be a safe option for healthy, low risk pregnancies. However, limited studies have adequately explored maternal-neonatal morbidity across birth location, race, and ethnicity in a large, state-wide dataset in the United States.

Objective: To examine differences in maternal-neonatal morbidity across race, ethnicity, and birth location in the United States.

Methods: We analyzed n=360,086 maternity records between 2010-2016 for births occurring in Washington state. We examined maternal and neonatal morbidity within and across birth location (hospital vs. birth center vs. home), and by race (non-Hispanic White vs. non-Hispanic Black vs. American Indian) and ethnicity (non-Hispanic vs. Hispanic) within each birth location, in healthy, term, singleton pregnancies.

Results: Compared to hospital births, completed home births had fewer adverse maternal outcomes (OR: 0.52; 95% CI: 0.41, 0.66; $p<.01$) and fewer adverse infant outcomes (OR: 0.72; 95% CI: 0.62, 0.83; $p<.01$), and completed birth center births had fewer adverse maternal outcomes (OR:0.61; 95% CI: 0.48, 0.78; $p<.01$) and fewer adverse infant outcomes (OR: 0.64; 95% CI: 0.54, 0.76; $p<.01$). Hispanic women were significantly more likely to experience adverse outcomes compared to non-Hispanic women (OR: 2.39, 95% CI: 1.05, 5.46, $p<.05$) when examining home births alone. Neonates of non-Hispanic Black women were 19% more likely to experience adverse outcomes compared to neonates of non-Hispanic White women when examining hospital births alone ($p<.01$). Neonates of Hispanic women were less likely to experience adverse birth outcomes ($p<.05$) compared to neonates of non-Hispanic women when examining hospital births alone.

Conclusion: These findings reflect existing national racial and ethnic disparities in maternal-neonatal health. While keeping in mind important limitations of vital records data and emphasizing the need for further research, these findings highlight maternal-neonatal racial and ethnic health disparities in hospital and community births.

Funding: Washington State University Health Equity Research Center Grant Program (PI: Burduli)

Barriers to Postpartum Depression Care for Women with Perinatal Substance Use

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Purpose: The purpose of this study was to identify risk and protective factors associated with seeking care for postpartum depression (PPD) among pregnant and postpartum women who used substances during a recent pregnancy, were actively using substances during current pregnancy, or who identified as having concerns regarding their mental health.

Background: Affecting between 7% and 20% of pregnant and postpartum women, PPD is a well-known and recognized maternal health concern. Though there is a high incidence of PPD, it is estimated that 50% of cases go undiagnosed. While many women perceive pregnancy and motherhood with anticipation and joy, for some mothers this time instead becomes one shaped by fear, anxiety and depression. These conflicting emotions may make it difficult for a pregnant or postpartum woman to receive support from her family or social network, leading to feelings of isolation. For women within rural areas, the lack of support and limited access to care may cause the experience of depression to be even more pronounced. In addition, for those with a history of mental health concerns or substance use, feelings of stigma, isolation and fear of punitive recourse may further inhibit seeking pre- and post-natal care.

Perinatal substance use in the United States has grown at an alarming rate, with an estimated 5% of pregnant people utilizing at least one addictive substance. The effects of substance use during pregnancy are complex, and may impact both maternal and infant health. Due to trends of stigmatization and criminalization surrounding perinatal substance use, many pregnant women may avoid seeking and receiving care during pregnancy and postpartum, further increasing the risk of poor pregnancy and delivery outcomes.

Methods: Participants were recruited between December 2021 and September 2022 via care management referral from their participation in a larger study which implemented universal screening, brief intervention and perinatal substance use treatment referral. Following the narrative inquiry approach, participants engaged in an interview ranging from 18 to 25 minutes in which they were asked about their PPD knowledge, support system, and potential barriers to seeking care.

Outcomes Achieved: Seven women were interviewed. Four themes emerged during data analysis: (1) Family history of mental health concerns and/or substance abuse, (2) Stigmatization around mental health or substance use, (3) Lak of awareness surrounding PPD and (4) Isolation.

Implications for Practice: Nurses are placed in the unique situation to meet clients where they are. Recognition of trauma and practicing trauma informed care may help break the cycle of perinatal substance use and traumatic childhood experiences while also being a catalyst for program and systematic change. Utilization of programs such as Nurse-Family Partnership and nurse home-visiting in rural areas may provide many mothers the access to pre- and post-natal care that is currently missing.

Social Determinants of Health Phenotypes and Perinatal Health Among Black Individuals

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Purposes/Aims: The purpose of this study is to contextualize perinatal health outcomes among Black US residents by examining clusters of county-level variables measuring social determinants of health (SDoH). The aim is to identify latent clusters (patterns) among SDoH indices to understand variation in perinatal health outcomes, including protective as well as risk patterns.

Rationale/Background/Conceptual Basis: The legacy of racial discrimination as well as current racial disadvantage in the United States has contributed to the perpetuation of disparities in perinatal outcomes for Black families compared to white families. A limited number of studies have examined the mechanisms by which racialization causes health disparities and few have explored the role of protective factors. The CDC collects national data gathered from birth certificate records providing a valuable opportunity for exploring national and county-level associations. Our approach centers individuals identified as Black and frames variables associated with improved outcomes as protective factors, which represent the strengths of communities or protective policies that combat structural racism or disadvantage. We used an anti-racism framework to interrogate this dataset and will make these data accessible to researchers, clinicians, and community to leverage for justification of grants, policy proposals, and research aims that directly serve the communities represented in the data. Finally, we used qualitative interviews of Black women who have experienced severe maternal morbidity to frame the interpretation of the data.

Methods: In this retrospective cross-sectional study, we extracted birth certificate data from the CDC Wonder Natality database from 2016-2020 for counties with a population ≥100,000. Data were merged with county-level SDoH variables reporting systems-focused, place-based factors including: geographic region, urbanization, access to parks and public schools, environmental quality indices, access to grocery stores, WIC utilization, housing availability, and medical infrastructure. Key perinatal quality care indicators included cesarean, induction of labor, access to midwifery care, and breastfeeding; key perinatal outcomes variables included maternal morbidity, preterm birth, low birthweight, and NICU admissions. Using latent mixture modeling, we used county-level SDoH variables as indicators and determined the best fitting class structure. We describe the county phenotype in terms of protective features and risk factors. We then regressed the perinatal health outcomes onto the classes to examine differences between classes of county-level SDoH.

Assessment of Findings/Outcomes: We expect that SDOH will cluster in such a way that protective SDoH features will align with improved measures of perinatal quality care and positive perinatal outcomes. The inclusion of the voices of Black women will add richness to the data and will contextualize the analysis in the experience of being racialized.

Conclusions/Implications/Recommendations for Future Undertakings: Understanding the ways that protective SDoH measures cluster with perinatal quality care indicators and perinatal outcomes indicators will empower researchers and local communities to better understand how to target important areas that influence perinatal outcomes among Black women.

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Perinatal Telehealth: Meeting Patients Where They Are

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Purpose: The purpose of this qualitative study was to describe perinatal patients' and providers' experiences with telehealth during and after the acute phase of the COVID-19 pandemic to inform future utilization of perinatal telehealth to drive delivery of high-quality, accessible, and equitable perinatal care to ethnically and geographically diverse communities.

Background: Prior to the COVID-19 pandemic, studies of innovative telehealth perinatal care models showed similar clinical outcomes and perceived quality of care between groups receiving a combination of virtual and in-person visits compared with those receiving only in-person prenatal care. However, these studies included a primarily white and English-speaking sample while excluding those who were economically disenfranchised or did not speak English. The purpose of this study was to examine how provider and patient experiences with telehealth during the COVID-19 pandemic can be leveraged to inform utilization of telehealth to provide equitable access to perinatal care.

Methods: In this descriptive exploratory study, we identified a purposive sample of 13 patients and 17 providers who received or provided perinatal care via telehealth between March 2020 and April 2022. Participants were eligible if they engaged in nurse-led perinatal care in either a certified nurse-midwifery practice or in the nurse-family partnership care model. Maximum variation sampling was used to seek a diverse population based on race, ethnicity, and rurality. Researchers conducted two rounds of semi-structured (20- 60 minutes) with a focus on understanding social and geographic context.

Results: Four themes were identified through inductive analysis: unexpected advantages of telehealth, providers' fear of bad outcomes, concern for equitable care, and strategies to enhance the telehealth experience. Patients appreciated the increased ease and reduced cost of accessing appointments which led to fewer missed appointments. Both patients and providers reported ease of technology use and were pleasantly surprised by the ability to make interpersonal connections via telehealth. Providers saw great opportunity in telehealth but expressed concerns about accessibility for patients who do not speak English and those with limited resources.

Conclusions: This study provides insight into priorities for continued telehealth implementation with a focus on providing equitable access to perinatal care. Rather than returning to practices from before the COVID-19 pandemic that were formed from longstanding routines and perceived limitations, providers are encouraged to make the most of the rapid innovations in telehealth to build a new, more effective and even more patient-centered approach to perinatal care. Priorities include:

- Targeted advertising and training for schedulers and providers to offer telehealth to patients who are economically disenfranchised or who do not speak English
- Provision of monitoring supplies
- Development of partnerships to provide integrated services via telehealth (behavioral health, lactation, education, peer support, and specialist consultations)
- Continuous quality improvement to evaluate telehealth benchmarking, attendance, and outcomes

This study lends hope that the next phase will be one of consolidating and institutionalizing the best models of care created through rapid implementation and innovation during the pandemic and mature into new systems of care that meet patients where they are in a more complete way and provide more equitable care.

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Childhood Adversity and Mental Health in Diverse Postpartum Mothers

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Purpose/Aims: Aims were three-fold: (1) Describe adverse childhood experiences (ACEs), including 10 "Conventional" ACEs and 15 "Expanded" ACEs, among a diverse postpartum sample, and compare the Conventional in this sample to that of the landmark CDC-Kaiser ACEs study sample; (2) investigate demographic variation in the Conventional and Expanded ACEs in this sample; and (3) examine the Conventional and Expanded ACEs as predictors of depression, anxiety, and post-traumatic stress disorder (PTSD) symptoms at 6–12 weeks postpartum.

Background: The mental health and well-being of pregnant and parenting people is, from a life-course perspective, shaped by early life experiences. ACEs include traumatic childhood events that may confer risk for poor mental health during pregnancy and the postpartum period. The most common ACEs measure, composed of 10 types of ACEs (the "Conventional 10"), is well-studied in the context of perinatal mental health and is associated with perinatal anxiety and depression. However, these 10 ACEs were developed in a predominately White, well-resourced sample (the CDC-Kaiser sample) and may overlook traumas that harm marginalized groups. Because of its limited scope, the Conventional 10 alone may inadequately inform nurses working to advance health equity. This study addressed a paucity of knowledge about expanded ACEs in the context of postpartum mental health.

Methods: We conducted a secondary data analysis. Participants included 244 English- and Spanish-speaking mothers recruited at 6–12 weeks postpartum based on previously receiving a prenatal mental health referral from a Federally Qualified Health Center. Participants retrospectively reported on 15 types of ACEs, including the Conventional 10 (Kaiser-CDC ACEs questionnaire) plus 5 Expanded ACEs (based on the Philadelphia ACEs questionnaire). Participants also self-reported demographics and postpartum (6–12 weeks) depression (PHQ-9), anxiety (GAD-7), and PTSD (PCL-C) symptoms.

Outcomes: Mean Conventional 10 and Expanded 15 ACE scores were 3.67 ($SD = 2.83$) and 5.15 ($SD = 3.84$), respectively. Compared to the CDC-Kaiser sample, this sample reported higher prevalence on all 10 Conventional ACEs. ACEs varied demographically, with mothers immigrating to the US in adulthood reporting fewer Conventional 10 and Expanded 15 ACEs than those born in the US. The Conventional 10 accounted for significant variance in depression, anxiety, and PTSD (Adjusted R^2s = 0.07, 0.06, and 0.13, respectively). The Expanded 15 ACEs increased variance explained over the Conventional 10 by 43% for depression, 67% for anxiety, and 38% for PTSD (Adjusted R^2s = 0.10, 0.10, and 0.18, respectively). One Conventional ACE (mental illness of a household member) and two Expanded ACEs (discrimination and homelessness) uniquely predicted all three mental health outcomes.

Conclusion/Implications: This sample reported a high prevalence of the Conventional 10 ACEs. Two of the three ACEs that uniquely predicted postpartum mental health were from the Expanded set, pointing to their salience. The findings about demographic variation deserve further study; our ACEs measures were based on questionnaires developed in US populations and may have missed adversities experienced by immigrant populations. Further ACEs measure testing or development may be necessary to better inform nurses caring for marginalized postpartum populations.

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Feasibility and Acceptability of a Distant Intervention with Perinatal Mental Health

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Purposes/Aims: This study used a mixed methods single-arm experimental design with an overall purpose to evaluate a remote-access, evidence-based intervention for perinatal depression & anxiety (PDA) and substance use risk (SUR). Aim 1: assess the acceptability and feasibility of an internet-based intervention for women with symptoms of PDA and low to moderate SUR. Aim 2: obtain preliminary data on treatment response among women experiencing symptoms of PDA and with low to moderate SUR.

Rationale/Conceptual Basis/Background: Up to 65% of women with perinatal substance use (PSU) either have depression or screen positive for one or more psychiatric symptoms. This connection makes it crucial to assess and deliver interventions for PDA and PSU concurrently. However, assessment and treatment for PDA and PSU are typically evaluated separately. Furthermore, barriers to mental healthcare access exist for women in rural and low-resource settings, often due to a scarcity of mental health professionals. Digital and remote-access platforms are increasingly acceptable, but little is known about which platforms— e.g., on-demand, web-based, synchronous, or asynchronous—are most feasible and effective. The conceptual framework links vulnerability, response, health outcomes, and a technology acceptance model to evaluate acceptability and response to the study intervention.

Methods: The study embedded an evidence-based intervention (mindfulness based cognitive therapy) into an existing patient education portal (YoMingo®). Pregnant and postpartum women attending routine clinical visits were screened for PDA symptoms with the Edinburgh Postpartum Depression Scale (EPDS). Those who screened positive were invited to participate and allowed to choose and engage in one of three platforms for an 8-week period: (a) on-demand educational material only, (b) on-demand plus 4 biweekly synchronous videoconference sessions, or (c) on-demand plus discussion board access (Facebook). Feasibility was measured by the number of women who participated, number of sessions completed, and via participant interviews. Intervention response was assessed with pre-post EPDS, GAD-7, and NIDA Quick Screen and Modified ASSIST to measure SUR. Lastly, tracking through the YoMingo® platform identified participant use and access patterns.

Assessment of Findings: Data collection and analysis are in progress. Preliminary results: A total of 217 women were invited to participate in this study (April – October 2022) and eleven women enrolled. The most active time to access the platform was between 2am and 4am. Four women chose on-demand access only, four women chose on-demand and live sessions, and three women chose on-demand and discussion board. Participant interview identified frustration in finding the modules in YoMingo®, and a desire for motivation to stay engaged in the platform.

Implications: The study experienced low enrollment due to COVID-19, but other barriers to participation are likely, including difficulty with engaging in the platform and lack of external motivation. Further data collection and analysis will be used to inform approaches to optimize recruitment, engagement, and usability of the platform for future studies. Pregnancy is a motivating time to seek treatment for PSU and PDA, and a remote-access platform is one technique that can increase access to evidence-based interventions. This can be especially helpful for women in rural and low resource settings.

The Role of Technology for Pregnant Women Making Decisions about COVID-19 Vaccination

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Purpose: The purpose of this study was to explore pregnant women's perceptions regarding COVID-19 vaccination during pregnancy and to identify information sources pregnant women used to guide their COVID-19 vaccination decisions.

Background: COVID-19 infection can result in adverse health outcomes for both mother and newborn. The Centers for Disease Control and Prevention (CDC) considers pregnant or recently pregnant women to be a high-risk group for COVID-19, prompting a strengthened recommendation on August 11, 2021, for COVID-19 vaccination for women ages 12 years and older who are pregnant or lactating. Despite the recommendation, pregnant women are more COVID-19 vaccine-hesitant than non-pregnant women, warranting further investigation. In addition, due to the dynamic nature of COVID-19, recent research regarding COVID-19 vaccine acceptance recommends ongoing surveillance of vaccine behaviors and attitudes among pregnant persons.

Method: Qualitative research methods are valuable in providing rich descriptions of complex phenomena as well as tracking unique or unexpected events; thus, a qualitative descriptive study design was used for the study. A purposive convenience sample was obtained, consisting of 41 women living in Utah or Salt Lake Counties, Utah, USA, who had been pregnant at any time since the strengthened CDC recommendation. Following informed consent, semi-structured interviews were conducted, recorded, and transcribed. Research team members analyzed data separately to identify preliminary themes. Analysis continued as a team until themes were finalized.

Results: The primary influence on COVID-19 vaccination decisions was counsel received from healthcare providers. Family and friends were also mentioned as influential, particularly those who were healthcare workers. Regarding technology, women frequently conducted their own internet research, both to obtain and clarify information, and the majority of women interviewed referenced information they obtained from the CDC. Fears of complications from vaccination were a major deterrent with many women referencing the novelty of the vaccine. Conversely, the fear of getting COVID-19 influenced many women to get vaccinated to avoid pregnancy complications and negative fetal outcomes. Additional social influences included work, travel, advice from religious leaders, and feelings of responsibility to protect others.

Conclusions: While technology is an important tool to obtain and clarify information, for the women in this study, information received from their health care provider and advice from family and friends, particularly those in the health care field, played a more important role. These findings help place emphasis on the importance that health care workers provide evidence-based information, both in-person and through technology, concerning COVID-19 vaccination during pregnancy. Further investigation is warranted to determine additional ways to help increase vaccine acceptance.

Funding: This study was funded in part by a Thacher Community Grant (American College of Nurse Midwives) as well as a research grant from the College of Nursing at Brigham Young University.

Develop a Digital Sleep Intervention Reducing Gestational Hypertension Disparities

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Purposes/Aims: This proposed study is to develop a digital sleep intervention to reduce gestational hypertension disparities in the U.S.

Background: The prevalence of hypertension disorders of pregnancy (HDP) ranges from 5% to 28% depending on the diagnosis criteria and populations in the U.S. The 2014-2015 national birth cohort data showed substantial ethnic differences in the prevalence of HDP (e.g., 9.8% for non-Hispanic Blacks vs. 7.2% for Non-Hispanic Whites). HDP is associated with an increased risk of adverse outcomes for both mother and fetus. Growing evidence shows that sleep disturbances are associated with the development of HDP. Importantly, sleep disparities were also observed among ethnic minority pregnant women with 34% of Black women and 32% of Hispanic women experiencing sleep disturbances respectively compared with 20% of White counterparts. However, merely using either self-reported questionnaires and/or sleep lab diagnosis may delay early identification of sleep disturbances. Furthermore, evidence is lacking regarding the impact of sleep interventions on cardiovascular health among ethnic minority pregnant women. Thus, this proposed study is to address these gaps.

Methods: A community-based participatory research (CBPR) is used as the overall methodology to achieve the proposed aim in three phases through collaborating with community partners. During phase I, the research team synthesized the updated evidence. A literature review was conducted with the databases (e.g., PubMed, CINHAL). The key words were used including sleep/sleep intervention, hypertension/gestational hypertension/ blood pressure/cardiovascular health, perinatal women, ethnic disparities. During phase II, a Community Advisory Board (CAB) will be formed to co-develop a culturally sensitive digital sleep intervention. CAB will be composed of key stakeholders from ethnic communities such as patients/family advocates, obstetricians, cardiologists, sleep experts, and nurses/nurse practitioners/midwives. Phase III: the research team and CAB will co-develop an intervention implementation and evaluation plan to test the feasibility of this digital sleep intervention.

Findings: The observation studies of literature showed that poor sleep quality and short/long sleep duration were associated with gestational hypertension. Risk of hypertensive disorders of pregnancy was higher in women reporting ≤5 h/d and ≥10 h/d sleep compared with the reference category of 8–9. In addition, intervention research of literature demonstrated that there were four types of non-pharmacological perinatal approaches that could reduce sleep disturbances including psychological (e.g., mindfulness), educational (e.g., psychoeducation), lifestyle (e.g., exercise) and chronotherapeutic (e.g., sleep hygiene) programs. Specifically, exercise significantly improved sleep outcomes with small to large effect sizes. However, most study samples in these studies were women who were predominantly well-educated, in stable relationships, primiparous and of White race/ethnicity. In addition, sleep was often measured using the self-reported questionnaires. The existing literature suggests the importance of the development of a culturally sensitive digital sleep intervention by considering the needs of women experiencing disadvantage, leveraging technology as well as partnering with community stakeholders.

Conclusions/Implications: The research team will collaborate with community stakeholders and perinatal women from ethnic minority groups to co-develop the culturally sensitive digital sleep intervention with the goal of reducing gestational hypertension through improved sleep health.

Funding: University of California Irvine Interim COVID-19 Research Recovery Program; UCI Undergraduate Research Opportunities Program (UROP)

Significance of Becoming a Mother Theory in the NICU: A Theory Analysis and Evaluation

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Purposes/Aims: To provide an in-depth analysis and evaluation of Ramona Mercer's Becoming a Mother Theory in the context of the NICU environment, using Walker and Avant's method of theory analysis.

Description of Theory or Method/Definition of Concept to Be Discussed: Ramona Mercer's *Becoming a Mother Theory* is a middle-range nursing theory that has been widely used as a framework for nurses researching and working with mothers/birthing parents and infants. It was originally created in the 1980s to define the transitive process that occurs when becoming a mother. There has been little development on the theory since its introduction.

Logic Linking Theory/Concept/Method to Practice or Research: Mothers/birthing parents undergo a transitive process when becoming a parent that is likely disrupted when their infant is born prematurely and requires NICU-level care. Separation often occurs following delivery of the preterm infant and the mother/birthing parent must spend the early days of parenting in the intimidating NICU environment. Nurses in the NICU have a sustained interaction with the mother/birthing parent and their infant. They can facilitate minimal disruption to the natural developmental processes of the mother/birthing parent. Mercer's theory has the continual potential to guide nurses, but it is important to integrate the understanding that becoming a birthing parent is a highly individualized experience and that societal changes on how motherhood is viewed have occurred since the theory was first introduced. Further exploration of the lived experiences of mothers/birthing parents from different socioeconomic and cultural backgrounds could contribute to further development of the theory so that it is more applicable to all mothers/birthing persons in the 21st century.

Conclusion: A theory evaluation and analysis of Mercer's theory via Walker and Avant-informed strategies demonstrate the need to update the theory for relevance to 21st century mothers/birthing parents. Considerations for future research should include changed societal views of motherhood, inclusion, and diversity. With additional testing and development, Mercer's theory may continue to guide nurses to facilitate minimal disruption of relationship development between mother/birthing parent and infant in the NICU environment.

MENTAL HEALTH

Quality Improvement Project: Naloxone Telephone Outreach in a Mental Health Clinic

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Background: In June 2022, 47.37% of at-risk veterans in an outpatient veterans administration (VA) facility were prescribed naloxone, which was significantly lower than the 63.8% national average of other VA facilities. Pharmacists in other VA facilities used telephone outreach to improve naloxone distribution to at-risk veterans. The purpose of this quality improvement (QI) project was to implement a telephone outreach program at this facility to increase naloxone prescription rates to at-risk veterans diagnosed with opioid use disorder (OUD).

Among veterans diagnosed with opioid use disorder (OUD), overdose affects 62.1%. Naloxone is an opioid receptor antagonist that reverses the effects of opioid overdose. Over the past 20 years, naloxone access programs improved naloxone access and use in high-risk populations. The programs resulted in (a) correct identification of opioid overdose and naloxone use among people at-risk for opioid overdose, and (b) no increased drug use or high-risk behavior. Naloxone nasal spray use was so user-friendly that over 90% of laypersons successfully administered naloxone nasal spray without prior training. In addition, a naloxone prescription was effective *even if not filled* because successful training for clients decreased the risk of opioid overdose.

Methods: The Getting to Outcomes (GTO) method of quality improvement was used for this project. The baseline assessment included an evaluation of the naloxone prescription rate at the start of the implementation. Data collection included the number of veterans with (a) an opioid use disorder diagnosis, (b) an active opioid prescription, (c) discontinued opioid prescription in the past 180 days, or (d) an opioid overdose in the past 12 months. Veterans were excluded from the program if they (a) moved away to another facility, (b) had a less-than-16-day opioid prescription for outpatient surgery with no other underlying overdose risk indicators, (c) were admitted to an inpatient rehab facility, or (d) had a naloxone prescription within the past 365 days.

Intervention: The nurse-led intervention team implemented the telephone outreach from June 7, 2022, to September 7, 2022. Telephone outreach addressed two groups of veterans; (a) veterans diagnosed with OUD and (b) an expanded list of veterans with traits that placed them at-risk for opioid overdose, including OUD.

Results: The new naloxone prescription rate for veterans diagnosed with OUD in the facility was 47.37% as of June 2022 (n = 19), and the rate at the end of the intervention in September 2022 was 82.35%. The naloxone prescription rate for at-risk veterans in the facility was 20.0% as of June 2022 (n = 90), and the rate at the end of the intervention in September 2022 increased almost three-fold to 58.24%.

Conclusion: The telephone outreach exceeded goals and increased the naloxone prescription rates for at-risk veterans at the facility in three months.

Keywords: naloxone telephone outreach, opioid use disorder, at-risk veteran, overdose, overdose education, and naloxone distribution (OEND)

Implementation of a Shared-Decision Making (SDM) Approach in a Mental Health Clinic

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Purposes/Aims: The purpose of this DNP project is to implement an evidence-based SDM approach in order to increase client-provider collaboration and improve client autonomy and engagement.

Rationale/Background: According to the Substance Abuse and Mental Health Services Administration (SAMHSA), shared decision-making (SDM) is a collaborative communication approach between patient and provider that aims to help people in treatment work together to have informed, meaningful discussions about their health care decisions. SDM has proven to be effective in positively impacting health outcomes and is the gold standard of client-clinician interaction in preference-based care by the National Academy of Medicine. Mental health SDM is associated with increasing satisfaction of care, improving patient medication adherence by 9%, reporting fewer psychiatric symptoms, and decreasing hospitalizations by 20%. Existing research has identified several barriers to implementing mental health SDM into clinical practice at the provider level. These barriers include the misperceptions about the competence of clients to make treatment decisions, time limitations, and lack of skill in risk communication.

Brief Description of the Undertaking/Best Practice: The DNP-PMHNP student will provide an inservice rooted in the Seek, Help, Assess, Reach, Evaluate (SHARE) Approach model to PMHNPs at a community based mental health clinic located in San Diego, CA. The SHARE Approach model was developed by the Agency for Healthcare Research and Quality (AHRQ) and is a systematic, five-step process for SDM which includes exploring the potential benefits, harms, and risks of treatment options through meaningful dialogue about the patient's priorities. The DNP-PMHNP student will measure patient extent of involvement in the decision making process from the perspective of both client and provider during a psychiatric evaluation using the Shared Decision Making Questionnaire (SDM-Q-9). The SDM-Q-9 will be measured across 20 client-PMHNP interactions both pre and post inservice.

The IOWA Model for evidence-based practice will be used. Using the Iowa Model will allow the DNP-PMHNP student to clearly identify the need for clinical practice improvement and integrate empirical evidence to support this change efficiently and effectively. This model also allows for important feedback loops to cycle back when barriers present throughout the implementation process.

Assessment of Findings/Outcomes Achieved: In progress.

Conclusions: This intervention will improve knowledge about SDM among PMHNPs. This will aid in standardizing and structuring SDM practice. Having a structured SDM approach in mental health care will reinforce a client- centered treatment model as a result of making more informed and personalized treatment plans. Focusing on practices to improve SDM for PMHNPs will ensure nursing care can continue to go beyond the traditional model of health care. This intervention will continually address potential barriers, uphold autonomy, provider-client relationship, and empowerment that will lead to better outcomes in mental health care treatment.

Housing and Treatment Adherence Impact on Mentally Ill Homeless Veteran Readmission

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Purpose/Aims: Homelessness affects healthcare systems significantly with increased hospital visits by homeless persons, of which 30% had a diagnosis of mental illness (Reese, 2019). Mental illness contributes greatly to homelessness and hospitalization (Streeter, 2022) with about 9 percent of all homeless population in the United States being military veterans (United States Interagency Council on Homeless, 2018). The average cost per the Department of Veteran Affairs (VA) hospital discharge ran about $30,282 in FY2019 and increased to approximately $40,763 in FY2020 (Wagner, Chow, Su, & Barnett, 2018). The 2023 federal budget for the VA for mental health is $13.9 billion and $2.7 billion in housing programs for homeless veterans (McDonough, 2022; Yarmuth, 2022). The purpose of this project is to evaluate whether housing provision and treatment adherence upon discharge affects readmission to psychiatric hospitals for homeless veterans with mental illness.

Rationale/Background: Homeless veterans with a diagnosis of mental illness have frequent psychiatric hospital admissions (Raad, Tarlov, Kho, & French, 2020). This project will focus on homeless veterans with previous psychiatric hospitalizations who were provided with housing and/or reported treatment adherence following discharge to determine its effect on future readmission.

Approach/Method: This effort will collect data of all homeless veterans admitted to an acute psychiatric unit in one California VA medical center from January 1 to June 30 in 2022. Eligible subjects may be any gender, under 65 years of age and have a diagnose of at least one mental illness that meets DSM-5 criteria. Data collection from the electronic health record will include: all admissions and discharges of homeless veterans to the acute psychiatric unit, who meet the inclusion criteria, their discharge plans, treatment adherence, and readmissions that occur within 1-6 months.

Findings/Outcomes: The project plans to compare readmissions from subjects discharged without housing or treatment plans to those with housing assistance and where there is evidence of treatment adherence, in order to determine whether there is a statistically significant difference or any correlation. Results of this secondary data analysis will be available in spring 2024.

Conclusion/Implication: Homeless veterans have high prevalence of mental illness (Gabriellian, Gores, Gelberg, & Tsai, 2018; Inoue, Shawler, Jordan, & Jackson, 2022). The VA has established programs to reduce homeless veterans' population by providing assistance in housing (U.S. Department of Veterans Affairs, 2021). Evaluating the impact of housing provision for homeless veterans and treatment adherence can provide evidence of connections to healthcare, housing, and other assistance that benefit our country's veteran population to ensure continued provision of services to those who served.

Mental and Behavioral Health Treatment in the Digital Age

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Purpose: This project examines the experience of adults aged 18 or older living in the United States with using the Telehealth or Telemedicine platform for mental or behavioral health treatment compared to in-person visits during the COVID-19 pandemic.
Background: The demand for mental and behavioral health services has continued to increase as the global rates for anxiety and depression have both climbed 25% throughout the COVID-19 pandemic beginning in 2020 (WHO, 2022). Recent years have unveiled a shifted increase in virtual mental and behavioral health treatment in the United States using Telehealth. Telehealth is a video conferencing platform used by healthcare providers to provide clinical treatment to patients. Accessibility to health resources has been greatly increased with Telehealth, especially in rural counties where 60% have mental healthcare shortages (Morales, 2022). However, the experience of mental and behavioral health providers and patients using Telehealth platform compared to in-person visits during the COVID-19 pandemic remain unclear.
Methods: *Design*: we will use a mixed-methods approach including online survey and interviews to address the study purpose. *Sample and Sampling*: the survey sample will consist of 50 adults living in the United States who are 18 years or older and have had at least 3 months of virtual mental/behavioral treatment and 3 months of in-person mental/behavioral treatment. The interviews will include 3 mental/behavioral health providers experienced in using both treatment platforms. Valid and reliable measures will be used to assess the key variables. *Analysis*: Descriptive and non-parametric statistics will be used to describe the distribution of the key measures and compare the experience using different treatment platforms. Thematic analysis will be used to analyze qualitative data for key patterns and emerging themes.
Assessment of Findings: We plan to complete data collection and analysis by January, 2023.
Conclusions/Implications: The findings will provide a deeper understanding of patients' and providers' experience in using different treatment platforms and inform future improvement in service delivery to promote mental and behavioral well-being of patients.

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Depression and Cognitive-Test Performance after Heart Transplantation

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Aims: To evaluate relationships between depression, depressive symptoms, and cognitive-test performance after heart transplantation.

Background: While transplantation represents a valuable treatment option, depression and depressive symptoms are common after organ transplantation and are associated with a greater risk of clinical events and poorer quality of life. Additionally, there is evidence that a substantial portion of heart transplant survivors may meet criteria for mild cognitive impairment. The aim of this analysis was to understand how depression and depressive symptoms are associated with specific domains of cognitive function in this population.

Methods: We conducted a cross-sectional, observational study. Measures included the telephone-Montreal Cognitive Assessment, Patient Health Questionnaire-9 (PHQ-9), and Brief Test of Adult Cognition by Telephone.

Assessment of Findings: We included 35 participants (Male = 25, Mean age = 61 years) that had received a heart transplant at least 6 months prior to the start of the study. Most participants were white (n = 25), married (n = 29) and well-educated, with over 77% (n = 27) having attended some college or more. 37% (n = 13) had depression scores in the "mild" range and no participants had moderate or severe depression scores. Overall depression scores were associated with delayed word recall intrusions ($r = .36$, $p <.05$), indicating a relationship between mild depression and episodic memory. The two most common depressive symptoms were feeling tired or having little energy (n = 20, 57%), and difficulty sleeping or sleeping too much (n = 19, 54%). Older participants were more likely to report difficulty sleeping or sleeping too much ($r = .376$, $p <.05$). Language fluency ($r = -.358$, $p <.05$) and delayed memory recall intrusions ($r = .382$, $p < .05$) were associated with difficulty sleeping or sleeping too much. Feeling tired or having little energy was not significantly associated with cognitive-test performance.

Conclusions/Implications: Reports of difficulty or excessive sleeping were higher than rates in the general population and were associated with older age and worse performance on some cognitive tests. Rates of depression are known to be elevated in this population and high rates of sleep difficulties may be contributing to this. Previous research indicates that sleep is important for memory consolidation, and insufficient or excessive sleep is associated with cognitive decline. Future research should consider how sleep is associated with depression, functional performance, cognitive function, and symptoms, including fatigue, after heart transplantation. The use of comprehensive measures of depression and sleep are needed to further elucidate these relationships and inform interventions to support this complex population.

MENTAL HEALTH

Exploring the Frequency of Hospital-Based Chaplain and Nursing Interactions

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Purpose: To describe frequency of hospital-based nursing-chaplain interactions and explore factors influencing higher reported frequency of interactions.

Background: In the hospital setting, chaplains are often consulted nurses are confronted with death and must manage complex psychosocial family and patient ethical decisions and during the COVID-19 pandemic, nurses reported facing an increased number of morally distressing events. Chaplains can serve to resolve ethical conflicts between the medical team and patients and help nurses debrief complex, distressing patient cases. Although interactions with chaplains have been linked to decreased stress and increased job satisfaction among nurses, less is known about frequency or rationale for nurse-chaplain interactions, nor what factors may influence frequency of interactions since COVID-19.

Methods: This secondary analysis presents data from a cross-sectional survey among registered nurse participants across seven states who responded “yes” to the item: “Are chaplains present and available in your work setting?”. Outcomes of interest were reported frequency of interactions with chaplains over the past 12 months for 1) patient, 2) occupational, and 3) personal issues with options ranging from never to daily. Factors that were hypothesized to influence frequency of chaplain-nurse interactions included demographics (years of experience, shift, specialty, religiosity/spirituality, hospital bed size), and perceptions that the COVID-19 pandemic increased nurse-chaplain interactions, that chaplains are important, and that chaplains provide spiritual support to caregivers (measured with Likert scales ranging from “strongly disagree” to “strongly agree”). Once the most common reason for frequent chaplain-nurse interactions was calculated, categorical variables were compared on this outcome using chi-square tests and continuous variables tested with unpaired t-tests assuming unequal variances with alpha set to 0.01.

Assessment of Findings: A total of 767 registered nurses were included. On average, nurses moderately agreed that chaplains are important in the hospital setting and reported frequency of chaplain interactions for the following issues: 1-2 times in the past 6 months (patient-related), 1-2 times in the past year (occupational), and almost never (personal). The proportion of nurses who reported interacting with chaplains at least once per month in the past year for patient, occupational, or personal issues was 20% (n=153), 8% (n=59) and 5% (n=40), respectively. Nurses who reported interacting with chaplains at least once per month over the past year for patient issues were more likely to work the day shift or a critical care/emergency room specialty ($p<0.01$) and more strongly agreed that chaplains are important, provide spiritual support to caregivers, and that COVID-19 increased frequency of interactions ($p<0.01$) compared to nurses reporting less frequent interactions.

Conclusion: Nurses reported most frequently interacting with chaplains for patient-related issues versus occupational and personal issues over the past year. Nurses who reported high-volume interactions with chaplains for patient issues were more likely to work the day shift in emergency or critical care settings and perceived chaplains provide spiritual support to caregivers and that COVID-19 contributed to increased chaplain interactions. Future studies are warranted to identify optimal strategies for chaplains to interact with nurses to support emotional wellbeing, particularly during times of intense stress and moral conflicts.

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MENTAL HEALTH

Effective Emotion Communication Utilizing Non-Verbal Tools: A Systematic Review

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Purpose: The purpose of this systematic review is to identify non-verbal communication tools that measure emotion.

Background: Emotions experienced and challenges communicating emotions by patients and healthcare providers can affect the outcomes and care of patients. Non-verbal communication tools offer an alternative approach to expressing emotion that may be beneficial in health care settings.

Methods: A comprehensive search of six databases and a manual literature search was conducted in the fall of 2021 and yielded 1026 articles. Search terms included: tool, self-report, non-verbal, symbol, emoji, visual, and visual scale. Inclusion criteria were peer-reviewed and in English, non-verbal tool of communication, and emotion as at least one outcome. Exclusion criteria were spoken language and those that did not have an image or emotion involved. Abstract review was conducted by three RN reviewers with advanced degrees and utilized a consensus via Microsoft Excel to track and decided differences of opinion. A total of 146 articles were left after of the abstract review. Two RN reviewers completed the full-text review utilizing Covidence. Eighteen articles were in the final sample. Data was analyzed by thematically by characteristics of population, emotions analyzed, tool utilized, and limitations.

Results: All the studies ranged in classification from qualitative (N=6) to quantitative (N=9), and some used a mixed-method design (N=3). Emojis were the most common tool used, ten employed emojis to express emotion. The populations that the tools were developed for ranged in age from children to older adults. The target population in three articles was children, older adults made up three studies, anyone over ten years had three studies, and adults over eighteen were the population of nine studies. The tools measured a variety of emotions. Thirteen studies assessed any emotion experienced, one tool focused only on anxiety, depression was assessed in one tool, any “threatening emotion” was measured in a single tool, confusing or unclear emotions were measure by one tool, and negative emotions were measured in one study.

Implications: By looking at the tools in these studies, a variety of emotions can be measured. This is important for all different populations. Emojis were the most commonly used tool for emotional measuring, and is very appropriate to anyone interested in understanding emotion. Emojis are common daily forms of communication for all ages, so research can utilize emojis to identify emotions in participants of all ages. Health-care providers were not specifically studied as a population, and would benefit from research on non-verbal tools identifying emotion. This would allow healthcare providers to quickly communicate in high emotional times non-verbally, if they were in emotional distress.

A Complex Systems Theoretical Framework for Endometriosis and Co-Occurring Anxiety

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Purpose: Endometriosis is a complex gynecological disease affecting approximately 10-15% of females. Endometriosis results in debilitating symptoms (e.g. dysuria, dyspareunia, dyschezia, and dysmenorrhea) that often present with co-occurring anxiety (e.g. uncontrollable worried thoughts, feelings of tension, increased heart rate and blood pressure). The pathophysiology of these co-occurring illnesses (endometriosis and anxiety) are unclear, though available evidence from preclinical and clinical research suggests that alterations of the intestinal microbiome may link endometriosis and anxiety. Utilizing theory reformulation, a novel complex systems theory provides a framework to investigate the pathophysiology of endometriosis and co-occurring anxiety, and explain how these complex innerworkings affect the mental, emotional, and spiritual aspects of the affected individual.

Theory Description: Complex systems are comprised of a multitude of relationships that result in a specific set of properties including: nonlinearity, feedback, emergence, and self-organization. Nonlinearity occurs when an input and corresponding effect are not congruent, such that a small input results in a very large effect; as a result of self-reinforcing feedback loops. Emergence is the development of new properties, arising from the creation of an organizational structure, yet not demonstrated in the singular components of that structure. Complex systems exist in a state of continual self-organization, resulting from emergence, feedback, and chaos, evolving into higher levels of complexity. Self-organization results in new patterns, behaviors, or structures that have not been previously demonstrated in the complex system.

Logic Linking Theory: Nonlinearity, such as the overgrowth of one microscopic organism, can compromise the homeostasis of the entire female reproductive system and gut-brain axis. The estrobolome is the collection of enteric bacteria that possess the capability to metabolize estrogens through the secretion of ß-glucuronidase. Dysbiosis, particularly the increase of ß-glucuronidase secreting bacteria, can increase levels of ß-glucuronidase, resulting in an excess of deconjugated estrogens, and hyperestrogenic disease processes, including endometriosis. The compromise of the gut-brain axis begins with dysbiosis, leading to subsequent overactivation of the hypothalamic-pituitary-adrenal (HPA) axis. Interoceptive stimuli, an effect of dysbiosis, triggers a conditioned fear response and ensuing HPA axis activation, which further contributes to dysbiosis. This process of dysbiosis, interoceptive stimuli, conditioned fear response, and HPA activation continually repeats itself in a positive feedback loop. When viewed separately, the components of the gut-brain axis demonstrate different properties than when combined as an organizational structure, also known as emergence. Self-organization results in new patterns, behaviors, or structures as a result of feedback and emergence. Self-organization is demonstrated by psychopathological symptoms (anxiety) as a result of nonlinearity (dysbiosis), feedback (HPA axis overactivation), and emergence (gut-brain axis). A new concept added to the existing constructs within complex systems transcends the physical level and further describes and defines the mental, emotional, and spiritual aspects of the complex system.

Conclusion: The properties inherent to complex systems are key to understanding the relationships involved in the estrobolome, the gut-brain axis, and the resulting symptoms of endometriosis and anxiety. Therefore, this reformulated theory is well suited to guide research focused on symptom management and the creation of novel treatments for co-occurring endometriosis and anxiety.

Adapting Parse's Humanbecoming Theory to Promote Nursing Professionals' Well-Being

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Purpose/Aim: The nurse-patient partnership is essential for providing safe and effective patient care. Parse's Humanbecoming Theory discusses the role of the nurse in the nurse-patient partnership as supporting the patient with self-transcendence to encourage healing. Self-transcendence is defined as the expansion beyond one's internal, external, temporal, and transpersonal barriers to promote well-being through a sense of connection and purpose. Though the nurse may indirectly benefit from these experiences, adapting this theory to concentrate on the nurse's self-transcendence is advantageous for nursing professionals, and the nurse-patient partnership overall.

Description of Theory: In Parse's Humanbecoming Theory, the nursing professional partners with patients and employs both practice knowledge and true presence to help them achieve their desired outcomes, enhancing well-being and healing. Motivated by the Humanbecoming Theory's goal of patient self-transcendence within this partnership, the developing framework seeks to focus specifically on nurses' self-transcendence. Shifting the concern to nursing professionals provides space for their well-being to flourish, encouraging healthy and effective nurse-patient partnerships.

Internal Consistency of Concepts/Theory: This adaptation to Parse's Humanbecoming Theory maintains the following principles from the original theory to promote healing and well-being: 1. the deep connection with the universe helps humans become more present in their situation to live a more conscious life, 2. the universe and humans coexist together, shaping and reshaping each other through experiences to create meaning and understanding, 3. humans create both tangible and intangible patterns within themselves, their environment, and with others to make sense of their reality, and 4. true presence in a given situation helps bring balance to a human's life, which is imperative for their evolution and excellence. The adaptation to the Humanbecoming Theory and its principles assumes that the "human" being discussed is the nursing professional. This shift magnifies the view of the nurse as an integral part of the nurse-patient partnership. It is prudent to investigate and support nursing professionals' health and well-being by stimulating their own self-transcendence.

Logic Linking to Research Problem: The nurse-patient partnership is imperative for promoting patient well-being and inducing positive health outcomes. Following the COVID-19 pandemic, nursing professionals are experiencing higher incidences of moral injury, which negatively affects this partnership. Current nursing theories, including Parse's Humanbecoming Theory, focus on patient health and well-being within this partnership, but do not place enough, if any, emphasis on the nurse involved. As a crucial and fundamental part of the nurse-patient partnership, it is imperative to consider and investigate nursing professionals' well-being. Enhancing self-transcendence is linked to an increase in well-being, hence the substantial focus on self-transcendence within the Humanbecoming Theory and the motivation behind adapting this theory to address nurses' self-transcendence.

Conclusion: Given the necessary role of nursing professionals in the nurse-patient partnership, and the importance of the nurse-patient partnership to patient outcomes, it is critical to examine the well-being of nurses. This adaptation to Parse's Humanbecoming Theory seeks to promote nursing professionals' self-transcendence, a process that is known to bolster well-being, for the betterment of nurse-patient partnerships.

Fear of Recurrence in Myocardial Infarction Survivors

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Purpose: The primary objective of this study is to evaluate fear of recurrence as a mediator of illness perception and perceived stress in the acute myocardial infarction (AMI) population. The following aims are specific to this research: a.) to examine if fear of recurrence is a mediator of the relationship between illness perceptions and perceived stress of AMI patients; b.) to assess the changes in fear of recurrence over time in AMI survivors; c.) to investigate the significance of the final model with the addition of the covariate adjustments.

Rational/ Conceptual Basis/ Background: Acute myocardial infarctions are often accompanied by psychological sequelae that may interfere with survivors' physical, cognitive, and emotional recovery. Patients who suffer from myocardial infarction (MI) are taught to take proactive measures to prevent future cardiac events, including decreasing overall stress. Unfortunately, those who survive a myocardial infarction (MI) have a 20% chance of suffering a second event in the first year. In addition, those who have experienced an AMI are at high risk for recurrence. Theoretical models suggest that illness perception, fear of recurrence, and stress influence health outcomes. However, the relationships between these variables have little empirical data within the AMI population. Therefore, the study utilizes Leventhal's common-sense method of self-regulation to investigate how fear of recurrence (or progression) acts as a mediator of illness perception and perceived stress.

Methods: The data collection is in progress, with a completion time of early spring 2023. In this repeated measures, descriptive design, adult AMI (n=120) survivors at a Level 1 trauma center, identified from hospital admissions within the last year, as well as AMI survivors from Facebook recruitment methods, respond to self-reported surveys measuring illness perception (Brief Illness Perceptions Questionnaire [BIPQ]), fear of recurrence (Fear of Progression Questionnaire [FoP-Q]), and perceived stress (Perceived Stress Scale [PSS-10]). Demographics are also collected from patient-reported variables of concurrent health conditions, attendance at cardiac rehabilitation, and modifiable risk factors such as diet, exercise, and smoking. In addition, a COVID-19 questionnaire identifies patients who may have had to delay care or other indices related to COVID-19 and myocardial infarction. The data are collected twice, with six weeks in between, to identify changes over time.

Assessment of Findings: Data will be analyzed using R, an open-source statistical database. The mediation package specific to R will be used to demonstrate the counterfactual framework of causal inference. The analysis will evaluate how the perception of illness affects perceived stress and how the variable of Fear of Progression transmits this influence among the variables. Data will be visualized with histograms and scatterplots, and assumptions for multiple linear regression will be tested.

Implications: Findings from this study will facilitate an understanding of the fear of recurrence in nursing practice. The integration of this phenomenon can aid future interventions in maximizing other ways to minimize the fear of recurrence among patients with cardiac problems.

Keywords*:* Acute myocardial infarction, perceptions of illness, fear of recurrence, perceived stress, fear of progression

Translating Findings from a Research-Based Play into a Mental Health Intervention

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Purpose: The purpose of this presentation is to describe the approach used to translate findings from the talk-backs following a research-based play about depression into a six-week, therapy-based, virtual sister circle intervention for middle- and older-aged Black women who experience depressive symptoms.

Method: The Rigorous and Accelerated Data Reduction (RADaR) technique was used to reduce transcript data derived from six talk-back sessions with audiences (N=196). Guided by the overarching research question (*"What were the most salient topics raised by audience members about the experiences of depression among Black women?"*), we identified six major themes across transcripts. Given our aim to develop a therapy-based intervention, we mapped each theme to one of six processes of Pulling Out of Fire (POOF ®), a culturally-adapted form of Acceptance & Commitment Therapy that was developed as a mental health intervention for Black Americans.

Linking Method to Research: Each of the themes and POOF® processes are covered throughout the six-week intervention. One theme and one POOF® process serve as the topic and therapeutic strategy that are addressed during each session.

Conclusion: Utilizing a method that integrates arts-derived community input and culturally-tailored clinical therapies can help ensure that mental health interventions address the specific needs of Black women who experience depressive symptoms. Public/community health nurse researchers who work in partnership with communities are particularly positioned to utilize this community engagement approach when designing mental health interventions.

Funding: Dr. Skrine Jeffers received support from the California Arts Council, Research in the Arts grant under grant number 16-00004; University of California, Los Angeles, Resource Centers for Minority Aging Research Center for Health Improvement of Minority Elderly (RCMAR/CHIME) under NIH/NIA Grant P30-AG021684; and, by NIH/NCATS UCLA CTSI Grant Number UL1TR001881. Its contents are solely the responsibility of the author and do not necessarily represent the official views of the NIA or the NIH.

ZOOM Meditation to Reduce Psychological Distress in Puerto Ricans after Huracán María

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Purpose: This study will examine the feasibility, acceptability, and preliminary effectiveness of a meditation intervention delivered using Zoom intended to reduce psychological distress among Puerto Ricans who experienced Hurricane Maria.

Background: In 2017, Hurricane Maria devastated Puerto Rico, serving as the impetus for continuing sociopolitical unrest. Puerto Ricans overwhelmingly report psychological distress related to these experiences. Additionally, more than 40% of Puerto Ricans live below the poverty line, and people experiencing lower-socioeconomic status (SES) have a higher risk for stress-related health problems including anxiety and depression. Since Hurricane Maria, many healthcare providers including psychiatrists and psychologists left Puerto Rico to practice on the mainland, leaving the island with a mental healthcare crisis. Telehealth may be a solution to this crisis. While electricity and internet connectivity can be unreliable in Puerto Rico, nearly every resident has a cell phone or device that can access software like Zoom.

Meditation interventions like CBCT (Cognitively-Based Compassion Training) have been found to be effective at decreasing psychological distress in various populations. However, technology-based mental health interventions have not been well-tested in Puerto Rican populations. This study, therefore, seeks to determine if CBCT delivered using Zoom is feasible, acceptable, and effective at reducing psychological distress in Puerto Rican who experienced Hurricane Maria.

Methods: This study is part of a larger, randomized-controlled study. Puerto Rican participants of the parent study will be identified through secondary data analysis. Participants will self-report demographic information through REDCap. Participants will complete weekly, 90-minute, synchronous, CBCT sessions over Zoom for 10 weeks. Before and after the study, participants will complete PROMIS short-form surveys to assess symptoms of psychological distress. Puerto Rican participants will be invited to an additional interview assessing their experiences with the intervention and technology delivery.

Anticipated Findings: The feasibility of the intervention will be assessed by intervention attendance and retention rates of Puerto Rican participants. Acceptability will be assessed by interviewing Puerto Rican participants regarding perceptions of and experiences with the study and with the Zoom delivery method, and the likelihood the participants would recommend the program to others. Preliminary effectiveness will be assessed by comparing PROMIS scores before and after the intervention. Baseline PROMIS scores are hypothesized to be higher in the Puerto Rican group and post-test PROMIS scores are expected to decrease, but not as significantly as in the comparison group. It is also anticipated that the interviews will reveal SES-related barriers to Zoom interventions.

Implications: Now is the time to develop innovative healthcare delivery for populations vulnerable to extreme weather events related to climate change. Outcomes from this study will establish if Zoom is effective at delivering interventions for Puerto Ricans to reduce psychological distress. Establishing accessible technologies for care delivery offers nurses a way to reach patients who are at risk of disruption in care due to socioeconomic-related barriers or extreme weather events. Health promotion interventions are foundational to nursing and population health, so identifying interventions that retain effectiveness when delivered via telehealth is foundational to the future of nursing.

MENTAL HEALTH

Improving Patient Follow-up after Transcranial Magnetic Stimulation (TMS) Therapy

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Background: Depression is one of the most common mental disorders in the United States. In 2020 alone, an estimated 21 million adults experienced at least one depressive episode, representing 8.4% of all U.S. adults. Depression greatly affects peoples' daily functioning and overall quality of life. Transcranial Magnetic Stimulation (TMS) therapy is a cutting-edge option for treatment-resistant depression, and up to 70% of patients treated with TMS will achieve at least a 50% reduction in depression symptoms. For some, these results are long-lasting; for others, depression symptoms may return. Currently, there is no standardized follow-up procedure after patients finish a course of TMS to assess severity of depressive symptoms and burden of illness in the months following treatment.

Purpose of Project: The purpose of this project is to educate staff on the use of standardized screening tools to aid in their understanding of patients' depression symptoms, quality of life, and day-to-day functioning in the months following TMS therapy.

EBP Model: The Evidence-Based Practice Model selected to guide this project is the Johns Hopkins Nursing Evidence-Based Practice Model. This model uses a three-step process called PET: practice question, evidence, and translation. The goal of this model is to ensure that best practices are quickly incorporated into patient care.

Evidence-Based Intervention: The DNP student collaborated with the patient care team to implement a new follow-up procedure, which included administering three standardized scales to assess patient functioning and quality of life within the first 3 months after treatment with TMS. These scales included the Quick Inventory of Depressive Symptomatology (QIDS), Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q), and Work and Social Functioning Scale (WSAS). The DNP student conducted an in-service to educate staff about how these scales can be used to identify patients who could benefit from further therapy or maintenance TMS treatment. After the in-service, the DNP student used a likert scale to assess staff learnings.

Results: Pending

Managing Workplace Violence as a Registered Nurse

***Kayla Sullivan**, DNP, RN, Nursing, University of Nevada, Las Vegas, NV*

The Occupational Safety and Health Administration (OSHA) reports that over two million workers are victims of workplace violence (WPV) (Papa, 2013). Registered nurses are subjected to high risk for workplace violence from patients and visitors, with 25.5% reporting at least one victimization incident (Gillespie et al., 2013). Research indicates that WPV has a significant impact on nurses' quality of working life, job satisfaction levels, turnover rates and has also been shown to negatively impact efficiency and productivity (Gacki-Smith et al., 2009). ED nurses are at substantial occupational risk for workplace violence. Emergency departments have been identified as areas within the hospital in which the incidence of violence is moderately high, with nurses (67%) being most frequently being assaulted. Relative to other healthcare workers, emergency department (ED) staff face an exceptionally high risk for WPV, primarily due to open-door policies, a high volume of patients, and illness acuity.

The purpose of this project was to develop, implement, and evaluate an online module to improve ED nurses' knowledge, perceived safety, and confidence in identifying and managing WPV. This project utilized a pre- and post-knowledge assessment with an educational intervention (i.e., the video presentation) delivered in an online format. Via an online platform, participants were asked for demographic information, completed pre-knowledge and safety and confidence assessments. Participants viewed an informational video, and post knowledge, safety, and completed confidence assessments. A brief evaluation of the project's video was also completed.

One hundred and nineteen possible participants responded to the survey invitation. Of the 119, 44 completed the project requirements; thus, 77 participants were excluded from all analyses resulting in a final sample of 44 (N= 44). The majority of the final sample were female 37 (84.1%), mostly employed in the acute care or inpatient setting 37 (84.1%), and were nurses 40 (90.9%). Participants reported experiencing WPV at least once a day 27.3% of the time, 13.6% monthly, and 15.9% a few times a year. Some participants 16 (36.4%) reported they felt WPV increased during COVID-19. A significance difference (p= 0.00) was demonstrated on the knowledge assessments, increasing knowledge following the educational intervention. Scores on the safety and confidence assessment were improved, but not significantly.

Project participants reported that 75% of the time, the incident of violence involved a patient, and 11.4% of the time involved a patient's family member. Participants further reported physical assaults 59.1% of the time, emotional assaults 68.2% of the time, and verbal assaults 45.5%. The Emergency Nurses Association reports that patients are the main offenders in all incidents of patient violence (97.8%) and visitor violence (92.3%), with the triage area (40.2%) being the most common area of WPV occurring.

This project demonstrated that healthcare workers benefited from this educational module to improve their knowledge about WPV; however, changes in perceptions of safety and confidence in managing WPV need further research, especially among those working in the emergency department.

Developing Clinical Judgement and Understanding of the CJMM and Next Gen NCLEX Items

***Jaylynn Gold**, MSN, RN, CNE, Nursing, Weber State University, Ogden, UT*

Purpose: To develop clinical judgment in associate degree nursing students through an active learning method that facilitates understanding and application of the clinical judgement measurement model (CJMM), as well as understanding and application of the next gen NCLEX test items.

Rationale: Students learn best through active learning methods. In order to develop clinical judgement and deliver safe client care, students must understand the clinical judgment measurement model (CJMM) and how to apply it in their practice. Understanding and utilizing the next gen NCLEX test items also promotes development of clinical judgment.

Method: Nursing students in a 4th semester on-line ADN program at a local university were given an active learning assignment that required group collaboration to create an unfolding case study utilizing the CJMM and next gen NCLEX items in a true to life clinical scenario. Students were assigned to research best practice related to their chosen exemplar, then create an unfolding case study. Students were provided with a PowerPoint template to format the case study. The template utilized the steps of the CJMM as an outline, with instructions in the notes section of each slide that prompted students to provide the associated information, i.e., a slide for a patient scenario including relevant and irrelevant cues.

Students were taught about the new next gen NCLEX questions and given examples of the different item types along with instructions on how to create their own items. They were instructed to choose two different item types, create the question relevant to their exemplar, and insert the prepared items at the appropriate point along the unfolding case study.

Unfolding case studies were presented to the online class in a discussion format. Peers were assigned to review the case studies and provide comments and feedback. The case studies were also used as a study tool for the course.

Assessment of Findings/Outcomes Achieved: Students increased clinical judgment skills as they applied the steps of the CJMM for the delivery of optimal patient care in an unfolding case study. Formatting the case study in a PowerPoint presentation guided by the steps of the CJMM allowed students to gain a deeper understanding of the layers of the model through application. The students were able to study other presentations and had the opportunity to practice answering the next gen NCLEX questions. By creating and inserting unfolding case study questions into their case study, and answering their peers' questions, they utilized critical thinking and gained greater understanding of the next gen test item types and how they are built.

Conclusions/Recommendations: This active learning strategy will continue to be used in the future to build clinical judgment skills and teach the CJMM and next gen test items through active learning. The author recommends a future research study to evaluate perceived increase of student clinical judgment skill and understanding of CJMM and next gen NCLEX items through utilization of this learning activity.

Using Electronic Delphi Software to Run a Modified Delphi Study: Pearls and Pitfalls

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Purposes/Aims: The purpose of this poster presentation is to illuminate lessons learned while using an electronic process to execute a modified Delphi study. In addition to sharing personal experience, best practices for electronic Delphi methodology will be shared using examples from nursing literature. This presentation aims to enhance knowledge for researchers who wish to use eDelphi technology.

Rationale/Background: Delphi studies are used to achieve consensus among an expert panel. This technique is commonly used in nursing research. eDelphi technology is beneficial because it can simplify and shorten the process of conducting a Delphi study. The electronic platform is not bound by physical location, allowing consensus to be reached among experts in all areas of the world in a timely manner. This software simplifies data collection, allowing for a more streamlined approach to analyzing data and reaching conclusions. Familiarity with eDelphi software provides opportunities for researchers to use this method.

Brief Description of the Project: A small research team composed of members of the International Society of Nurses in Genetics developed a set of competencies to describe the scope and standards for genomics nurse educators. A modified Delphi study will be undertaken using eDelphi technology to achieve international consensus about these competencies. Undergraduate nursing students took on the project of learning how to set up and use eDelphi by conducting a literature review and studying online presentations about the software. As the research team prepared an IRB proposal for the study involving eDelphi, best practices have been recorded so that they can be shared.

Assessment of Findings/Outcomes: This project is currently in progress and will be close to completion near April of 2023. Lessons learned will be compiled throughout the project, with a more complete assessment of findings prepared for the poster presentation. Some of the benefits of using eDelphi are that it provides immediate results, including averages and quartiles. Data can be downloaded, making it easy to perform further calculations using Excel or other software. Additionally, raw qualitative data can be returned to panelists in real-time or at the conclusion of consensus rounds. However, eDelphi is unable to collect resumes or perform initial screenings prior to the start of a study.

Conclusions: The eDelphi software is useful in helping a panel of experts reach consensus, especially when the panel is international. Although there are some difficulties with the process, they can be overcome, allowing this technology to benefit and advance nursing research.

Funding: Brigham Young University College of Nursing

METHODS

Creative Solutions to Reduce Verbal Orders in Resource Scarce Healthcare Settings

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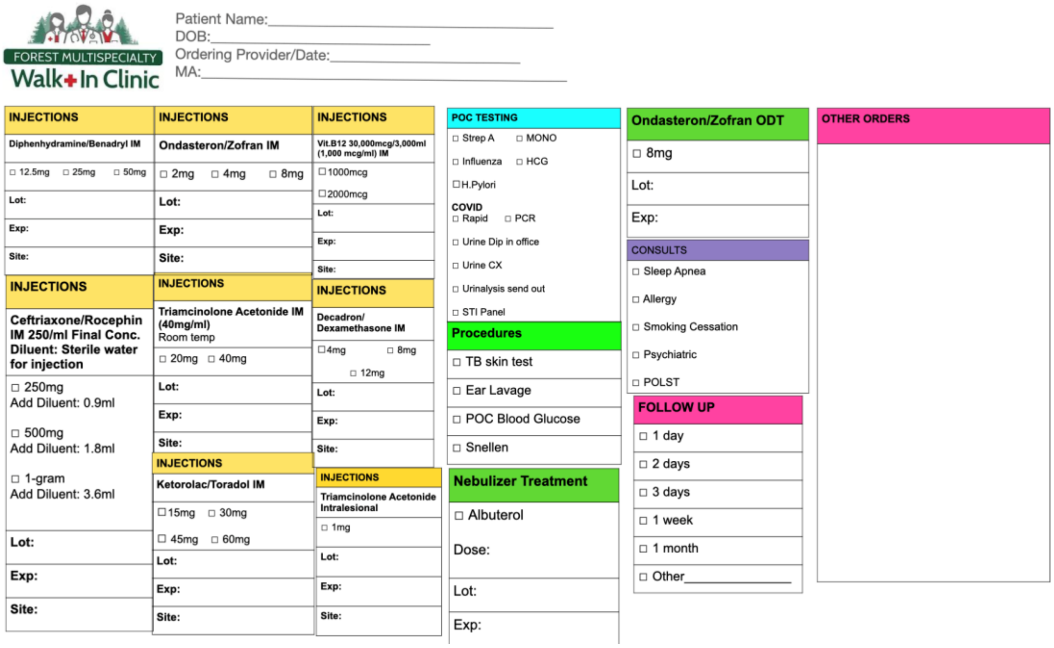
Utilizing verbal orders in routine healthcare situations can increase medication administration errors, patient harm and, litigious risk. Outpatient healthcare settings that are resource scarce lean on verbal orders to communicate the healthcare providers' directives to back office staff. Within clinics that are unable to implement electronic resources due to under functioning or limited use electronic health record systems, closed loop communication is lost and staff are expected to implement orders without inherent safeguards. Additionally, electronic health record systems that do not allow capture of orders compromises meaningful use and can diminish reimbursement for these clinics which stakeholders deem needs to be timely and accurate. Creative solutions can assist in organizing these services and identify billable procedures. The goal of this project is to identify a solution outside of an electronic health record system that reliably achieves safe order communication, provides clarity of orders, allows for a way to track billable procedures and provides meaningful use thereby expanding interoffice efficiency and quality of care within a clinic that does not utilize an electronic order procedure. This project will discuss innovative interventions to close these safety gaps by implementing a written order tool within the resource scarce healthcare setting, analyze practice-based evidence for safe medication administration, evaluate current ordering practice with limited electronic health record usage, correlate safe practice with optimal patient outcomes and, evaluate methods to promote patient safety.


FOREST MULTISPECIALTY
Walk+In Clinic

Patient Name:____________________________
DOB:_______________________
Ordering Provider/Date:__________________
MA:_______________________________

INJECTIONS
Diphenhydramine/Benadryl IM
☐ 12.5mg ☐ 25mg ☐ 50mg
Lot:
Exp:
Site:

INJECTIONS
Ceftriaxone/Rocephin IM 250/ml Final Conc. Diluent: Sterile water for injection
☐ 250mg
Add Diluent: 0.9ml
☐ 500mg
Add Diluent: 1.8ml
☐ 1-gram
Add Diluent: 3.6ml
Lot:
Exp:
Site:

INJECTIONS
Ondasteron/Zofran IM
☐ 2mg ☐ 4mg ☐ 8mg
Lot:
Exp:
Site:

INJECTIONS
Triamcinolone Acetonide IM (40mg/ml)
Room temp
☐ 20mg ☐ 40mg
Lot:
Exp:
Site:

INJECTIONS
Ketorolac/Toradol IM
☐ 15mg ☐ 30mg
☐ 45mg ☐ 60mg
Lot:
Exp:
Site:

INJECTIONS
Vit.B12 30,000mcg/3,000ml (1,000 mcg/ml) IM
☐ 1000mcg
☐ 2000mcg
Lot:
Exp:
Site:

INJECTIONS
Decadron/ Dexamethasone IM
☐ 4mg ☐ 8mg
☐ 12mg
Lot:
Exp:
Site:

INJECTIONS
Triamcinolone Acetonide Intralesional
☐ 1mg
Lot:
Exp:
Site:

POC TESTING
☐ Strep A ☐ MONO
☐ Influenza ☐ HCG
☐ H.Pylori
COVID
☐ Rapid ☐ PCR
☐ Urine Dip in office
☐ Urine CX
☐ Urinalysis send out
☐ STI Panel

Procedures
☐ TB skin test
☐ Ear Lavage
☐ POC Blood Glucose
☐ Snellen

Nebulizer Treatment
☐ Albuterol
Dose:
Lot:
Exp:

Ondasteron/Zofran ODT
☐ 8mg
Lot:
Exp:

CONSULTS
☐ Sleep Apnea
☐ Allergy
☐ Smoking Cessation
☐ Psychiatric
☐ POLST

FOLLOW UP
☐ 1 day
☐ 2 days
☐ 3 days
☐ 1 week
☐ 1 month
☐ Other______________

OTHER ORDERS

Engaging Stakeholders in a Patient-Centered Approach to CLABSI Prevention

***Lauri Linder**, PhD, APRN, CPON, FAAN, FAPHON, College of Nursing, University of Utah, Salt Lake City, UT;* ***Perry Gee**, PhD, RN, FAAN, System Nurse Scientist, Intermountain Healthcare, Salt Lake City, UT*

Purpose/Aims: The purpose of this project is to engage an interdisciplinary team of key stakeholders, including clinicians and parent members of our institutional Family Advisory Council to develop a comprehensive set of variables perceived as contributing to the risk of central line-associated bloodstream infection (CLABSI) among children with cancer and those undergoing hematopoietic stem cell transplant (HSCT).

Rationale/Conceptual Basis/Background: Central venous catheters are essential to meet the supportive care needs of children with cancer/HSCT; however, they carry an inherent risk of infection with associated morbidity and mortality. Noted disparities in CLABSI rates and underlying CLABSI risk exist among children with cancer/HSCT. Although national improvement in CLABSI rates has slowed, prevention strategies at many hospitals continue to emphasize psychomotor tasks associated with the care of the central line. This 2-phased project is engaging key stakeholders engaged in the care of children with cancer/HSCT to identify variables associated with infection risk. Variables will then be mapped to clinical terms in the electronic health record with the larger goal of identifying factors predictive of CLABSI among children with cancer/HSCT.

Methods: The study setting is Primary Children's Hospital (PCH) in Salt Lake City, Utah. Interdisciplinary team members including a registered nurse, infection preventionist nurse, pediatric oncology physician, infectious disease physician, dietician, pharmacist, environmental services provider, and two parents participated in two cycles of virtual focus groups. Focus groups were facilitated by two study team members. The initial cycle invited group members to propose potential risk factors and the associated rationale. During the second cycle, the study team presented results from the initial cycle and engaged group members in refining the list and proposing additional risk factors.

Results: Collectively, focus group participants proposed over 80 variables for consideration. Variables were grouped into 12 categories including: patient factors, infection characteristics, clinical characteristics, immune function, bleeding risk, bleeding manifestations, central venous catheter (device characteristics, hospital care, home care practices), nutrition, hygiene/personal care behaviors, nursing practice, hospital care environment, family education and behaviors.

Next steps include mapping proposed variables to clinical terms in the Patient-Centered Outcomes Research Network Common Data Model and the PCH electronic data warehouse. The final variable list will be reviewed with key stakeholders for final approval prior to extracting data for analysis. The proposed dataset will include children with central venous catheters admitted to the PCH Cancer/Transplant Unit from 2017-2021, a timeframe which coincides with transition to the current electronic health record.

Implications: Because parents are key partners in the care of the child with cancer/HSCT, including central venous catheter management, CLABSI prevention efforts inherently require patient/family engagement along with that of other key clinical stakeholders. The project is allowing us to explore complex interrelationships among variables related to the individual patient, the clinical context, and nursing care and how they contribute to CLABSI risk. Anticipated outcomes include identification of risk factors that can be targeted for future interventions and better prioritization of institutional resources to reduce the risk of CLABSI using a patient-centered perspective.

Funding: Greater Plains Collaborative Clinical Data Research Network 2021 Intermountain Healthcare and University of Utah Pilot Program

METHODS

Parental Stress in the PICU: A Concept Analysis

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Aims: To (a) examine the concept of parental stress to provide a greater understanding of the phenomenon in the Pediatric Intensive Care Unit (PICU) context, and (b) develop a conceptual map and an integrative conceptual model of parental stress in the PICU.

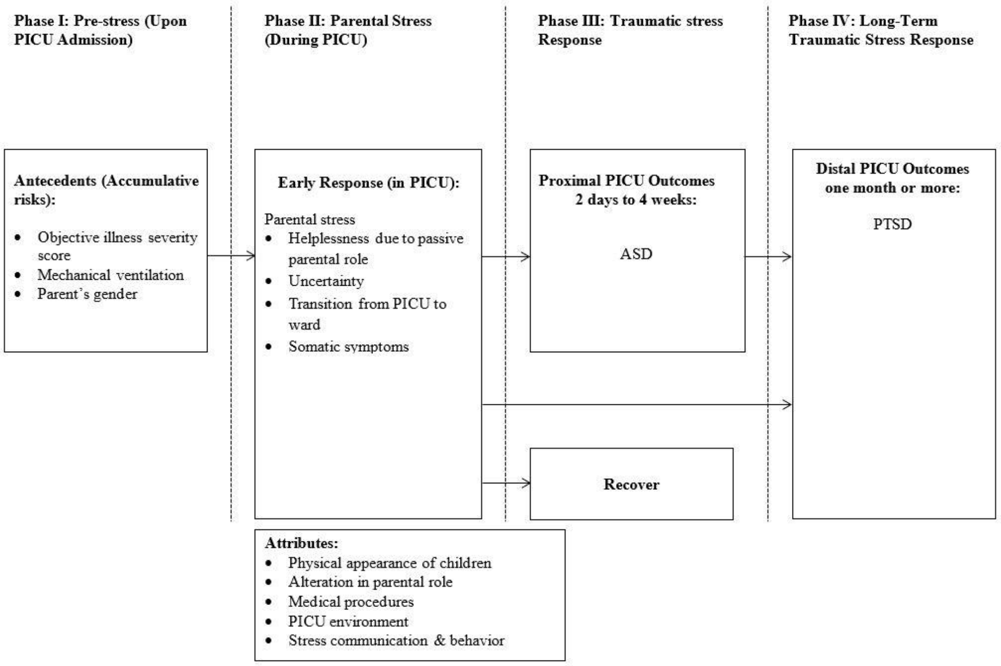
Background: The concept of parental stress in the PICU context lacks clarity. Often, parental stress is defined in relation to parents' appearance and perceived environmental stressors. Parental stress is often used interchangeably with terms such as traumatic stress, acute stress disorder (ASD), and posttraumatic stress disorder (PTSD). Parental stress has yet to be systematically explored or defined as a concept in the PICU context. Without a comprehensive understating of parental stress in the PICU, both providers and scientists are unable to develop evidence-based programs or services to minimize parental stress and help parents.

Methods: Walker and Avant's (2011) framework for concept analysis. Four databases: PubMed, PsycINFO, CINAHL, and Web Science were searched without a time limit until. Definitions, antecedents, attributes, consequences, and empirical referents of the concept were compiled.

Results: A total of 29 descriptive studies were included: 6 qualitative and 23 quantitative studies. There is inconsistency in the examined antecedents in the literature. Parental stress in the PICU led to a feeling of helplessness, uncertainty, stress about the transition from the PICU to the ward, somatic symptoms, ASD, or PTSD. Only one scale is available to measure parental stress in the PICU, but it may lack the sensitivity to capture the type of stress the parents currently experience in the modern PICU. Parental stress in the PICU constitutes a distinct concept from acute stress disorder ASD and PTSD. We synthesized an integrative model that illustrates the interrelatedness of three key concepts: stress, ASD, and PTSD. The model consists of four phases in parents' reactions toward PICU hospitalization and their child's illness (figure 1).

Conclusion: The measurement and assessment of parental stress and intervention program have been exceedingly limited. Further studies are needed to uncover the types of stressors in current PICUs, the associated risk factors, and the short- and long-term outcomes. Nurses need to be aware of the type of stress and its severity to plan the appropriate care.

An integrative model of Parental Stress in PICU



Application of within-Methods Triangulation to Analyze Hospital Health

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***Jane M. Carrington**, PhD, RN, FAAN, FAMIA, College of Nursing, University of Florida, Gainesville, FL, AZ*

Purpose/Aims: Qualitative Descriptive (QD) research is an adaptable collection of research methods that can be theoretically grounded to fit the identified research aim when researchers are seeking the "how," "what," or "when" of phenomena about which little is known. The most common data analysis methods applied to QD research include content and thematic analysis. **Blinded** (2018) were the first to describe a method of triangulating data through the application of content analysis and natural language processing for the purpose of analyzing nurse-to-nurse communication in an acute care setting. The purpose of this current research was to apply the within-methods data triangulation method of analysis to interviews done with nurses and nursing leaders in Magnet and non-Magnet designated hospitals.
Method: This research was done using a QD approach with semi-structured interviews of 12 nurses and nursing leaders in Magnet and non-Magnet designated hospitals regarding their perceptions of system-level influences that can impact the safety of patients and overall hospital functioning. The interviews were transcribed verbatim and analyzed using within-methods triangulation with an integration and application of thematic analysis, code quantification via the Goodwin Statistic, and natural language processing (NLP) using the psychometrically validated Linguistic Inquiry and Word Count (LIWC©) software.
Logic Linking Method to Research: Thematic analysis of transcribed interviews revealed 546 thematic units, which were organized into 22 categories and 37 subcategories. NLP analysis was done to compare transcribed interview data to LIWC© internal dictionaries representing 80 categories to reveal underlying cognitive processes and emotive states. The fusion of these methods of analysis provided insight into what was said and the underlying meaning and motivation behind the words that were spoken. This was exemplified by thematic analysis that revealed the category of *Broken Systems*, in which participants described hospital systems permeated with infighting, discontented staff, disconnected leaders, and suboptimal patient care. Meanwhile, the Goodwin Statistic revealed that *Broken Systems* was strongly emphasized and LIWC© analysis of the same data revealed that participants who spoke of *Broken Systems* had higher than average levels of *Clout*, *Differentiation*, and *Insight*, or the ability to confidently differentiate between people, places, or things that precipitate the elements involved in the *Broken Systems* of healthcare.
Conclusion: Thematic analysis is a conventional method of analyzing qualitative data. The application of within-methods data triangulation through the added use of the Goodwin Statistic and LIWC© analysis provides a depth of understanding to recognize not only the content of the words that the data represent, but also the cognitive and emotional states that informed or motivated those words. This methodology is very salient to nursing research that seeks holistic care of patients and those who care for them. Nurses hold great insight into the inner workings of hospital environments and the system influences that impact hospital health and patient safety. It is vital that techniques such as within-methods data triangulation are utilized to ensure that nurses' voices are fully heard.

Reducing Number of Deaths on Service in a Community-Based Palliative Care Program

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Background: Congestive heart failure (CHF) is the leading cause of U.S. hospitalizations in adults over 65 years with greater than one million patient cases annually. Despite advances in therapy, the number of hospitalizations has not decreased significantly over time. CHF exacerbations contribute to significant patient mortality with 30% of patients dying within one year of initial hospitalization. Given the complexity of management for CHF, the implementation of palliative care can help to mitigate patients' symptoms while also facilitating shared decision-making between stakeholders. Community-based Palliative Care (CbPC) is an emerging palliative care delivery model that serves patients with complex medical needs in their homes and communities. The interdisciplinary CbPC team help patients and their families to understand their prognoses, complete advanced care planning, and transition patients to hospice care when appropriate. These topics are guided by goals-of-care (GOC) discussions—an ongoing dialogue to assess patients' care wishes, including their hopes, fears, and sense of purpose through illness. CHF is characterized by time periods of high level of functional status, followed by exacerbations that may lead to unplanned hospitalizations, rapid deterioration, or death. Some CHF patients have suffered "unplanned" deaths in the acute care setting without having had a GOC discussion. These missed opportunities fail to identify the patient's goals for care. The literature has identified several key factors that must be addressed within palliative care: initiating GOC discussions using the Serious Illness Conversation Guide early in the disease course, incorporating the "Surprise Question" to identify the best participants, and revisiting GOC to foster shared decision making between stakeholders.

Purpose: The purpose of this quality improvement project is to propose a new practice workflow change involving timely GOC conversations and track its effectiveness in reducing unplanned hospitalizations and death for CHF patients enrolled in this CbPC service.

Methods: Following the Logic Model, this project will address the needs of a CbPC program in California that has been identified to have had CHF patients with "unplanned" deaths on service. A practice workflow change will be proposed and implemented. The "surprise question" will be used to identify currently enrolled CHF patients who would most benefit from future care planning. A checklist will be utilized to ensure a comprehensive GOC conversation, prognosis discussion, and advance directives are completed. The registered nurse will re-engage patients and their families in additional GOC conversation after hospital discharge or functional decline. Descriptive statistics will be used to summarize demographic information and project outcomes. Short-term outcomes include a 75% checklist completion rate for all participants at the end of the intervention, while long-term outcomes involve an overall 25% decrease of "unplanned" patient deaths on service one year after project completion.

Results: Pending.

Conclusions: Goals of care planning and discussion are paramount to improving the quality of patients with chronic disease. Maintaining patient centered care facilitates culturally appropriate and personalized management for patients and families. Improving practice workflow changes will support the success of a palliative care delivery model that serves patients with complex medical needs in their homes and communities.

PALLIATIVE CARE

Survivorship Care Plans for Survivors of Bladder Cancer Post-Cystectomy

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Purpose: The purpose of this quality improvement (QI) project is to develop and utilize cancer survivorship care plans (SCP) as part of the survivorship care given to patients undergoing cystectomy for bladder cancer treatment from November 2022 through March 2023 at an outpatient urology clinic. Prior to this project SCPs were not used, therefore the purpose of this project is to increase the use of SCPs among providers from 0% to at least 50% utilization.

Background: Since a greater proportion of people diagnosed with cancer are living longer after diagnosis, the focus of care for cancer survivors has shifted from treating the disease to promoting quality of life post-treatment and managing the chronic effects from cancer. The Institute of Medicine issued a call to healthcare organizations to improve cancer survivorship care by having providers complete SCPs for cancer survivors; the SCP provides details on the follow-up plan of care, signs of complications and cancer recurrence, and resources for support. Despite evidence showing the positive impact SCPs have on patient care outcomes and satisfaction, many healthcare organizations are not utilizing SCPs. To align with best practice, SCPs for bladder cancer patients who have undergone cystectomy will be developed and utilized by urology providers in an outpatient setting.

Description/Methods: This QI project was guided by Dorothea Orem’s Self-Care Nursing Theory and the Plan-Do-Study-Act framework. In order to leverage technology to decrease providers’ workload and increase the quality of cancer survivorship care, the SCP template was developed and then inputted into the electronic health record (EHR) to ensure providers and patients have easy access to SCPs. Once the providers begin using the SCPs in November 2022, student-developed questionnaires will be administered to gather quantitative and qualitative data regarding use of the SCPs and the impact on workflow. Quantitative data will be gathered from the EHR on the percentage of providers using SCPs. Quantitative descriptive statistics will be analyzed by a data analyst within the organization and qualitative thematic analysis will be conducted using a secure university platform; the Nurse Practitioner student and organizational director will review all data.

Assessment of Findings/Outcomes: This project is currently in progress and will be completed by the end of March 2023. At this stage, the SCP has been created and inputted into the EHR, and providers will start utilizing the SCP in November 2022. Results are not yet available, but the expected findings are an increase in the use of SCPs among providers for bladder cancer patients post-cystectomy

Conclusion: As the number of cancer survivors increases, survivors need focused care to promote quality of life and monitor for complications and recurrence. Prior evidence shows using SCPs as part of cancer survivorship care improves patient care outcomes; therefore, this project’s purpose to increase the use of SCPs by providers is projected to lead to improvement in the quality of patient care. These findings have the potential to benefit not only cancer survivors but also other healthcare organizations seeking to enhance their cancer survivorship care.

Multimodal Educational Strategy to Increase Palliative Care Communication

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Purpose: To create a system change in palliative education to increase palliative care communication in the acute care setting.

Rationale/Background: The value of palliative care is to prevent and relieve suffering through the early identification of chronic or noncurative diseases by addressing the patient's and family's physical, psychosocial, and spiritual needs. The lack of palliative care education among frontline nurses coupled with poor communication among physicians, staff, patients, and families impacts the utilization of palliative care in acute care settings. Literature highlights that registered nurses benefit from additional education and training regarding palliative care, specifically in communicating palliative care topics to patients and their families. Several studies suggested that multimodal educational approaches positively influence knowledge and communication among nurses.

Brief Description of the Undertaking/Best Practice: The Johns Hopkins Evidence-Based Practice model and a logic model were used as guiding frameworks to develop this project.

A proposed system change is to implement a multimodal educational strategy that includes a virtual reality (VR)-based clinical vignette, a 30-minute recorded lecture, and a laminated infographic badge summarizing key palliative care tools and information for registered nurses at the tertiary medical center in Southern California.

The primary outcome is engagement in palliative care communication. Engagement in palliative care communication refers to any of four actions by nurses: 1) discussing the pillars of palliative care with patient/family members, 2) goals of care planning, 3) emphasizing completion of advance directive, and 4) palliative care consultation with a specialist. The primary outcome will be measured through a self-report pre- and one-month post-intervention.

The secondary outcomes include knowledge about palliative care and self-efficacy in communication skills. These outcomes will be measured using the Palliative Care Quiz for Nursing (PCQN) and the Self-Efficacy Communication Skills, which are validated tools. Knowledge about palliative care will be measured pre-and immediate post-education. Self-efficacy in communication skills will be measured pre-and one-month post-intervention.

In addition, the feasibility of using a VR-based clinical vignette for education will be assessed with two Likert scale questions (0-5 scale) post-intervention: 1) How “present” did you feel in the VR experience? 2) How would you like to use VR again in the future for educational purposes?

Assessment of Findings/Outcomes Achieved: In-progress

Conclusions: The anticipated outcomes of the project will present opportunities to expand the educational strategies to other units while simultaneously incorporating this strategy as part of new RN employee orientation. The potential impact of this system change on palliative care utilization, days spent in the hospital, the number of hospital-based deaths, and subsequent cost-savings is exponential.

Perceptions of Palliative Care That Impact Access and Utilization

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Purpose: The purpose of this study was to synthesize the existing qualitative literature in patient, caregiver, and clinician perceptions of palliative care (PC) and identify emergent themes that impact PC access and utilization.

Background: When PC is integrated early in the management of patients with chronic and life-limiting illness, benefits include 1) improved patient quality of life and symptom management and 2) increased caregiver support. Yet, barriers to patients receiving PC in the U.S. exist, creating unnecessary patient suffering and contributing to overwhelmed and burned-out caregivers and clinicians. It is important to understand key stakeholder (patient, caregiver, and clinician) perceptions of PC and how these perceptions influence if and when PC is offered or provided. Therefore, a qualitative meta-synthesis was conducted to answer the question if patient, caregiver, and clinician perceptions of PC impact PC access and use, and are there common themes across and among the three stakeholder groups?

Methods: A formal qualitative meta-synthesis was conducted. Performing a meta-synthesis of the qualitative literature provides a framework to identify common themes across multiple settings and contexts. The study followed a standardized process that included 1) developing the research question, 2) completing a systematic literature search following the Preferred Reporting Items for Reviews and Meta-Analysis (PRISMA), 3) selecting relevant articles to be included, 5) performing a critical quality appraisal of articles, and 6) synthesizing the findings through reciprocal translation and thematic analysis. The meta-synthesis was limited to research conducted in the U.S. This was intentional to capture unique barriers and facilitators present in a Western healthcare system.

Assessment of Findings: The selected articles resulted in a sample size of patients (n=18), caregivers (n=15), and clinicians (n=118). Clinicians included physicians, nurses, nurse practitioners, social workers, and lay navigators. Three themes emerged from the analysis: 1) knowledge and beliefs related to PC, 2) care coordination and collaboration, and 3) social and structural conditions. Theme 3 contained sub-themes of hierarchy and ownership, socioeconomic factors, and time and resources. Themes 1 and 2 provided insights into facilitators and barriers to PC access and use, while theme 3 exclusively identified barriers. There were similarities in the knowledge and beliefs related to PC among all stakeholder groups.

Conclusions and Implications for Education, Practice, and Research: This meta-synthesis revealed the challenges the U.S. healthcare system faces to improve PC access and utilization. Over the years there have been efforts to increase PC knowledge. Yet, the sustainability of education is questionable. There remains an opportunity to develop innovative and sustainable educational approaches to improve knowledge and remove misconceptions for all stakeholder groups. In addition, clinicians identified tools and communication strategies that should be implemented into practice to improve care coordination and collaboration. Changes in practice are also needed to address the social and structural barriers identified in this study. Further research is warranted to increase understanding and address 1) the social and structural conditions hindering PC access and use and 2) coordination and collaboration of non-PC and PC clinicians.

Implementing Early Palliative Care and End-of-Life Planning to Improve Quality of Life

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Purpose: This study will measure the effects of palliative care and end-of-life planning interventions on patient quality of life within three to six months of initial chronic disease diagnosis.

Background: The influence of early palliative care interventions has been studied on patients with cancer, however, the research is lacking for patients recently diagnosed with other chronic diseases. Other studies have focused on palliative care for patients who are months from the end of life but not years from the end of life. Due to confusion between hospice and palliative care, many providers do not recommend palliative care as their patients are still seeking aggressive treatments for their diseases. Patients are often referred to palliative care when hospice is more appropriate. King's theory of Goal Attainment will help to guide this study.

Method: This will be a mixed-method study. Qualitative interviews will be used to assess participant knowledge about palliative care and hospice, feelings about end-of-life care planning and its importance, and goals and expectations for quality of life throughout disease progression. Interviews will be administered before the implementation of palliative care and each month of the study. These data will be analyzed using thematic analysis. Quantitative evaluation scales such as the use of the Memorial Symptom Assessment Scale (MSAS) will also be administered once a month throughout the study duration at the same time as the interview. The Quality of Life at the End of Life (QUAL-E) scale will be administered to assess participants' quality of life at the end of the study or if the patient enters hospice. These data will be analyzed using inferential statistics. Palliative care interventions will include frequent interactions to increase social and emotional support, and build stronger relationships using tools such as telehealth. Inclusion criteria will consist of patients diagnosed with a chronic disease within the past three to six months, terminal illness, and symptoms negatively affecting life. Exclusion criteria will include a predicted life span of less than one year and current hospice care.

Anticipated Results: It is predicted that as patients progress through the study, they will feel that their quality of life has improved, as well as decreasing anxiety around disease progression since goals, expectations, and symptom management will be continually and frequently assessed throughout the study. It is expected that goals, expectations, and end-of-life wishes may change throughout the study.

Implications for Translation to Practice: This study will add to the current knowledge about the timing of palliative care intervention for patients with chronic diseases, attempt to alleviate anxiety around death and disease progression, and help to disseminate information about the difference between hospice and palliative care. This will allow patients to focus on their quality of life over quantity, although quantity may also be affected. Further research can advance the field of palliative care to shift from the end-of-life and chronic disease phases into general primary care.

RURAL HEALTH

Rural Nursing as a Specialty

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Purpose: This project seeks to explore themes surrounding the experiences of working as a nurse in a rural setting. While visiting rural hospitals within a large, non-profit healthcare organization, nursing leaders shared concerns about staff turnover and changes to the work environment since the 2020 COVID-19 pandemic (Ohta et al, 2020). The purpose of this initiative is to better understand the unique experiences and needs of rural nursing.

Background: According to the Rural Health Information Hub (2022), rural nurses make up about 16% of the total Registered Nurse (RN) workforce, are nearing retirement, less likely to have a bachelor's degree, and less likely to work in a hospital. Over time, some rural RNs may choose to leave inpatient settings or the profession altogether due to an inability to realign with changing hospital values (Bragg & Bonner, 2015). Understanding rural nursing becomes increasingly relevant as nursing turnover has worsened and hospital systems struggle to meet the goal of maintaining, let alone increasing access to high quality healthcare.

Methods: Of the 33-hospital system, 8 were visited by researchers in person to interview staff. Facility administrators, managers and point-of-care staff were all included in semi-structured interviews. A series of questions was developed to perform the interviews with nursing staff in acute care settings. The investigators reviewed responses and identified consistent themes across facilities.

Assessment of Findings: Rural nurses experience unique challenges, including increased education requirements to be cross trained to multiple departments, limited senior staff, and even limited community resources that bridge patients to receiving care (lack of EMS staff, firefighters, medical transport infrastructures). Staff frequently mentioned that their role extended deeply into the roots of their communities – they were highly likely to see a former patient in the public, or care for a relative. This phenomenon was described as both being a reason they continue to work as a rural nurse (Cosgrave et al., 2019), and something that makes their role more difficult to maintain a healthy work-life balance. Staff consistently mentioned staying in their role due to being a life-long member of the community, feeling there are no other job options for them.

Conclusion: The completed interviews of this ongoing project reveal themes that may be significant to healthcare leaders as they adapt and change the clinical environment for the future. The first steps to improving current conditions in recruitment and turnover may be including rural leaders as key stakeholders in a hospital system and development of anticipatory recruitment and retention strategies – becoming more proactive as experienced rural nurses transition to retirement or leave for other reasons. In an urban-centric world, leaders may apply these themes and recommendations to recognize the role of rural nursing in creating equitable care.

Objectives:

1. Identify themes surrounding rural nursing and intention to leave/turnover
2. Increase awareness for healthcare leaders of rural facilities' unique needs and role in increasing access to quality care in communities

Topics:

1. Rural nursing
2. Nursing turnover and retention

RURAL HEALTH

Quality Improvement: Tools for Advancing Mental Health Awareness of Rural Adolescents

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Rationale and Background: Adolescents (ages 11-19 years) struggle with anxiety due to academic course pressures, school completion, and personal and family expectations. Rural adolescents are at an increased risk due to geographical isolation, low socioeconomic status, food insecurity, lack of occupational opportunities, and limited access to healthcare. Of the Washington state (WA) small district adolescents, 29.6% reported feeling nervous, anxious, or on edge, and 25% reported being unable to stop or control worrying for several days over two weeks. More importantly, less than half of adolescents who suffer from anxiety seek help.

This project is ongoing and in progress. It is supported by Washington State University College of Nursing and the Rural Health Alliance. The question is: by providing a free web-based psycho-educational resource library on adolescent anxiety to rural school staff, adolescent guardians/parents, and adolescents residing in the 79 WA rural school districts supported by the Rural Alliance, will they have a perceived improvement in mental health knowledge and increased utilization of mental health resources?

Purpose and Aims: This project's goal is to increase perceived anxiety mental health knowledge by 40% among the subpopulations within WA rural school districts and provide access to psycho-educational resources. One aim is to promote access and awareness of psycho-educational web-based resources in WA rural school districts. Secondly, formulate consistent psycho-educational anxiety resources via power points and videos specific to the subpopulations. Thirdly, extrapolate the number of views and the pre-and post-questionnaire results to obtain participants' perceived mental health knowledge improvements.

Approach and Methods: Data dissemination will occur at the end of the six months with an incorporated debrief. The Articulate 360 software will track the number of individuals accessing the education and decipher the subpopulation responses, while Qualtrics will collect the questionnaire data. The Plan, Do, Study, Act cycle is a vital guidance tool during the monthly TAMARACK meetings, which helps identify ways to improve the psycho-educational resources and their implementation. The Health Belief Model is highly recommended for educational programs and aligns with this quality improvement project. If the project implementation goes as planned, the subpopulations will view the resources and respond to the questionnaires. The dissemination of views and questionnaire responses will identify the subpopulations who responded. The improved perceived knowledge will be determined by deciphering the questionnaire responses.

Conclusions: It is assumed that this project will increase rural adolescent anxiety awareness and knowledge. The next steps would be to affect stigma related to mental health and increase access to care. There needs to be a focus on providing educational resources to improve health literacy, health promotion, and risk reduction, making health a top priority. This project provides an initial first step in filling this gap for our rural communities.

Evaluating the Feasibility of Text Messaging for Pain Assessment in Rural Veterans

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Purposes/Aims: To evaluate the feasibility of prospective patient-reported outcome assessment and self-management support using a VA text messaging system to track pain-related function and overall experience among rural Veterans receiving chronic pain management in the VA Community Care Network (CCN).

Rationale/Conceptual Basis/Background: Chronic pain is common, costly, and disproportionately impacts Veterans. For rural Veterans, access to pain care is inadequate, demanding innovative outreach and engagement approaches. To support remote or virtual care, there is a growing number of VA technologies, including text message-based apps, and chronic pain management is an important area in which to advance these technologies. However, since many rural Veterans with chronic pain are older and may be less familiar with new technologies, it’s unclear if these tools can be acceptable for this group. Thus, we explored the feasibility and acceptability of pain assessment and self-management support using an existing VA text messaging system.

Methods: Twenty rural Veterans receiving chronic pain management in VA CCN received a brief text message-based survey, consisting of the three-item PEG-3 scale, which measures past-week average pain intensity and interference with enjoyment of life and activity. Veterans recorded weekly PEG-3 scores for 6 consecutive weeks, receiving weekly pain self-management messaging in parallel. At the end of the 6 weeks, Veterans participated in a semi-structured, qualitative interview about their experiences utilizing the text messaging system. Interviews were conducted by videoconference, recordings were transcribed, and rapid qualitative content analysis was used to identify themes.

Results: Of the 20 enrolled Veterans, 14 provided weekly pain and pain interference scores, with 2 providing scores for each of the PEG-3 questions at each timepoint for the full 6 weeks. At these timepoints, the text messaging system supported the delivery of pain self-management information, and collected patient-reported outcome data, with PEG-3 scores ranging from 2-10 (10 being the worst pain imaginable). Ten Veterans completed a qualitative interview regarding their experiences using the text messaging system, reporting shortcomings in the platform, but saw value if text messaging could either connect them directly to their provider or could support the VA reaching out to them via text. Younger Veterans felt more comfortable using text messaging and felt they could benefit from this approach. Older Veterans adapted less well to the text messaging platform. Some Veterans identified technical flaws or opportunities to improve self-management content. For example, Veterans suggested including content about social support and suicide prevention given the negative impact of living with chronic pain on mental health.

Implications: Chronic pain is a leading reason Veterans seek medical care and has been linked to reduced quality of life. This pilot study of an existing text-messaging system did not demonstrate feasibility or acceptability for outcome assessment and self-management support in this context. Future interventions aimed at improving pain using mobile technology should offer an interactive approach to augment current treatment practice, further promoting pain self-management and patient engagement. Additionally, for providers, the collection of daily pain data using mobile technology may represent an opportunity to improve the quality of care.

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Climate Change Impact on Water & Health of Indigenous Communities in Northern Arizona

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Purpose: The purpose of this study is to examine climate change impacts on water quality in relation to community health status and perceptions in a Northern Arizona indigenous community.

Background: Indigenous communities are at high risk for the effects of climate change. However, data supporting this claim is sparse. It is assumed that tribal water supplies are at risk due to poor and aging infrastructure, frequent drought and flooding, and contaminated water supply. However, the tribes' remote locations, lack of resources, and sovereign status have contributed to a lack of efforts at water monitoring and remediation. The water sources these tribes rely upon are therefore at a higher risk of contamination. Contamination related to climate change includes agricultural and industrial runoff caused by extreme rain and flooding events. Water can also be contaminated by pathogens and vectors due to rising temperatures and water levels. Other vectors like mosquitoes can proliferate and produce secondary health issues. These types of contamination lead to health problems including mosquito-borne illness, acute and chronic infections, gastrointestinal disease, reproductive issues, neurological problems, and more. It is imperative that the tribes have access to a clean, safe water supply and that climate change effects are mitigated.

Methods: A water testing protocol and community-member survey protocol will be developed in partnership with the tribal council and stakeholders. A culturally safe water quality monitoring system will be implemented following EPA protocols, in addition to DNA sequencing to determine the microbial community in the water, focusing on areas of concern. Relationships between these contaminants and the community epidemiological profile will be assessed using vital statistics data. The community will be consulted regarding their relationship to the water supply, and how water quality affects their health and daily lives using a mixed methods survey and interview process. Responses will be compared to historical and contemporary epidemiological data. Finally, historical water quality and availability data will be compared with current samples, and future water quality projections will be modeled on QUAL2k in various weather trends.

Anticipated Findings: It is anticipated that the water quality data will strongly correlate with climate change events, and it is expected that these changes in water quality will be directly related to community health trends identified in epidemiological data and the community member survey and interview.

Implications: Climate change impacts water sources worldwide, and impaired water quality is associated with poor health outcomes. Indigenous communities are at risk for the effects of climate change, impaired water quality, *and* poor health outcomes as a result. This health inequity must be addressed. Nurses are key in connecting environmental data to health impact and leading an interdisciplinary team response to climate change. This study demonstrates a collaboration between engineering and nursing professionals to address the health implications of climate change. The outcomes of this study can support protocols and interventions that may be successfully employed in indigenous, rural, and remote areas worldwide in response to climate change.

Covid-19 and Nurse Anxiety, Coping, and Resilience in an Agricultural Community

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Purpose: The purpose of this study was to (1) determine relationships between anxiety, depression, resilience, and Covid 19 knowledge among nurses working in an acute care facility in an agricultural community serving a primarily Hispanic population during the Covid 19 pandemic; (2) determine whether nurses working in specific nursing units exhibit anxiety, depression, resilience, and Covid 19 knowledge more or less than those working in other units.

Background/Significance: The Covid-19 pandemic presents a novel existential threat to front-line healthcare providers that may exacerbate negative health outcomes related to stress. The relationship between anxiety, depression, resilience, and Covid-19 knowledge, attitudes, and behaviors has not been well described in rural communities especially those that cared for high percentages of Covid-19 patients. Before the pandemic a constellation of poor mental and physical health outcomes had been previously described in nursing populations. By enhancing personal strength in nurses through building resilience, nurses can adjust in a positive manner to adverse situations. Lazarus and Folkman's Transactional Theory of Stress and Coping was applied to assist with understanding responses to stressors.

Methods: A quantitative cross-sectional correlational survey design was used to examine self-reported anxiety, depression, and resilience of registered nurses at a community hospital located in the Imperial Valley of California. Three standardized assessments were utilized; the Patient Health Questionnaire-9 to identify depression, The 7 item Generalized Anxiety Disorder instrument, and the Brief Resilience Scale (BRS). Nurses were also queried as to housing disruptions and reassignment to new units during the pandemic. Additionally, nurses were asked to complete a Covid-19 Knowledge, Attitudes, and Behaviors questionnaire. Survey instruments were administered anonymously using the Qualtrics web-based survey tool in February and March 2021. Nurses at the same hospital were re-surveyed in April 2022.

Results: In Phase One 83 complete responses were collected, Phase Two captured responses from 45 respondents. In the initial survey 33.9% reported moderate to severe depressive symptoms, 20% reported moderate to severe anxiety, and 28.6 % reported low levels of resilience. When the same assessments were administered one year later, moderate to severe depressive symptoms had increased to 38%, moderate to severe anxiety slightly increased to 23%, and low resilience levels were similar to Phase One at 28%.

Implications for Translation to Practice: Phase One of the survey showed a concerning number of nurses experiencing depression and anxiety as well as low levels of resilience. In Phase Two of the study, depressive symptoms increased while anxiety and resilience levels were similar, with no improvements noted. Even though the healthcare system instituted strategies to assist mental health and build resilience in nurses, no improvements were noted in the psychological health of nurses in this primarily Hispanic, agricultural community. Further inquiry is needed to compare geographical differences in nurse coping and resilience and to identify successful strategies.

Somnus Support in Older Adults: A Concept Analysis

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Purpose: The purpose of this study was to conduct a concept analysis of *Somnus Support* that is defined as social support promoting sleep for healthy aging. Using Rodger's evolutionary perspective, we address the defining attributes, antecedents, and consequences of *Somnus Support*, as well as the strengths and limitations of the literature.

Background: The population of older adults is growing disproportionately, constituting 13% of the global population in 2022, and is expected to double by 2050. Healthy aging, the maintenance of functional ability consistent with well-being in older age, is a public health priority. *Somnus*, or sleep, is essential to intrinsic capacity for healthy aging. As many as 50% of older adults report poor sleep quality, leading to increase in the risks of morbidity and mortality in older adults. The quality and quantity of social relationships may broadly benefit sleep in older adults. As a result, *Somnus Support* has received increasing attention from researchers as an important target for improving sleep to promote healthy aging. However, *Somnus Support* has been defined and operated differently across studies, making it critical to conceptually analyze it to advance research.

Methods: An integrative review of literature was conducted. Existing literature was searched with no specific search period using keywords: sleep quality, sleep duration, sleep disturbance, aged, older adult, and social support in PubMed, CINAHL, PsycInfo, and Scopus starting on August 23, 2022. A total of 376 articles were generated and 42 relevant articles were screened in the full-text screening. Twenty-one articles examining social support and sleep in participants aged ≥ 50 were included. Thematic analysis was used to determine the defining attributes, antecedents, and consequences of *Somnus Support*, and to characterize the strengths and limitations of this literature.

Findings: The antecedents of *Somnus Support* reflect dimensions of social safety in close relationships, including perceived availability of social support, relationship engagement, relationship satisfaction, warmth, and intimacy. Attributes of *Somnus Support* reflect dimensions of sleep quality, including total sleep time, sleep onset latency, and wake after sleep onset. Consequences of *Somnus Support* reflect improved emotional, physiological, and behavioral regulatory capabilities consistent with healthy aging. Strengths of the literature include the generalizability of findings across settings and ethnicity/cultures. Limitations of the literature include reliance on cross-sectional design, self-report measures, and inconsistent definitions of social support.

Conclusions: *Somnus Support* has the potential to inform new approaches to promote sleep for healthy aging. Ongoing research is needed to address the mechanisms through which supportive relationships promote sleep for healthy aging. Studies involving dyads and longitudinal design are a critical next step.

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Sleep Quality of Persons with Dementia and Family Caregivers: The Lived Experiences

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Background: Sleep disturbance is common among persons with dementia (PWD). Little research has investigated dyadic interrelationships in sleep quality among PWD and family caregivers. PWD are often excluded from participation in qualitative sleep research due to memory deficits and impaired expressive language. Also underrepresented are immigrant ethnic minorities, particularly Korean Americans. To fully understand sleep quality among PWD-caregiver dyads, we should include their voices.

Purpose: The study aimed to describe lived experiences of sleep quality and sleep interrelationships of Korean American PWD and their family caregivers.

Methods: A descriptive study design was used using validated instruments and semi-structured interviews with cohabitating PWD and caregivers. Dyads were recruited in Southern California. The measures for caregivers' burden and stress and for both caregivers' and PWD's sleep included 1) Zarit Burden Interview (ZB, range 0-88, higher score indicating more severe burden), 2) Perceived Stress Scale (PSS-10, range 0 to 40, higher score indicating higher perceived stress), and 3) Pittsburgh Sleep Quality Index (PSQI, range 0 to 21, >= 5 indicating sleep disturbance). Descriptive statistics were used. Thematic analysis was applied to qualitative interview data transcribed verbatim in English. Caregivers provided verbal consent, plus surrogate consent for their PWD. PWD provided verbal assent. All PWD were assessed for their decision-making capacity.

Results: Ten dyads (Korean American PWD and caregivers) completed the surveys (mean age (SD) of PWD = 81.75 (2.99); mean age (SD) of caregivers = 67.58 (9.92); caregivers' relationship to PWD: 6 wives and 4 daughters; PWD's gender: 8 males and 2 females). Caregivers reported PWD dementia stage as mild to moderate. PWD had lived in the U.S. for a mean (SD) of 39.5 (17.3) years and caregivers for 44.4 (9.6) years. One PWD completed elementary school and all other PWD and caregivers completed college/university. Four dyads reported sharing a bed. All PWD and 9 caregivers showed sleep disturbances [PWD's PSQI mean (SD); = 6.5 (1.9), caregivers' PSQI mean (SD) = 7.3 (3.1)]. Caregivers' stress was moderate (PSS-10 mean (SD) = 21.1 (5.57)). Caregivers' burden was moderate to severe (ZB mean (SD) = 45.5 (18.76)).

Eight PWD with capacity to make decisions and 10 caregivers were interviewed. Major themes from PWD included 1) sleep challenges they feel are out of their control (e.g., frequent nighttime waking, long daytime naps), 2) acknowledgement of PWDs' dependence on caregivers, 3) forgetting their second language (i.e., English) causing communication challenges with offspring caregivers, and 4) mixed attitudes about their memory loss. Major themes from caregivers included 1) poor caregiver sleep quality caused by PWD's sleep disturbances and 2) providing focused care on improving PWD's sleep quality.

Conclusion: Findings demonstrate PWD's sleep disturbances affected caregiver sleep quality. PWD experienced poor sleep quality and acknowledged their daily caregiving needs. Although PWD understood their memory and sleep problems, they expressed their inability to change or improve them. Future interventions could address caregiving skills to improve quality of sleep for PWD-caregiver dyads with special attention on cultural competency (e.g., PWD's native language) to bridge the immigrant generational gap.

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Insomnia and Discrimination: Associations with Telomere Length in Older Adults

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Objectives: Science regarding the importance of telomeres to health has grown exponentially over the last few decades. Telomeres are protective caps at the end of chromosomes that protect them from erosion. There is growing evidence to suggest that shorter telomeres are related to the increased incidence of mental and physical health problems. The purpose of this study was to determine the relationship of insomnia and discrimination to telomere length (TL) among older White, Black, and Latinx individuals.

Methods: We performed a secondary analysis of data from the Health and Retirement Study, sponsored by the National Institute on Aging. Our analysis consisted of 1,315 US older adults who provided salivary samples from which telomere data was assayed. Insomnia was measured using the ‘Brief Insomnia Questionnaire’ and discrimination with the ‘Everyday Discrimination Scale’. We computed linear regressions to examine the relationship of insomnia symptoms and discrimination to TL in each group, including interaction terms to assess moderating effects of discrimination.

Results: Sleep disturbance was associated with shorter TL only among White individuals (β -0.107, p=0.002, [-0.12, -0.03]). In an unadjusted model, discrimination moderated the association between insomnia symptoms and telomere length among Black participants (β -0.282, p=0.045, [-0.33, 0.00]). For Black participants who reported discrimination, insomnia was associated with shorter telomeres while it had no relationship to TL for Black participants reporting no discrimination. However, after adjusting for age, BMI, medical co-morbidities, and depression, the moderating effect of discrimination was no longer significant.

Conclusion: Sleep disturbance appears to be adversely correlated with telomere integrity, but with differential relationships among groups. Research with a larger sample is needed to identify if other biological mechanisms may mediate the effects of insomnia on telomeres and determine if the effect of discrimination is unique to older Black individuals or across other groups. In addition, further research is warranted to better understand how covariates such as age, medical comorbidities and depression may interact with discrimination to affect telomere length. Findings suggest the importance of assessing both insomnia and exposure to discrimination in nursing practice so that interventions can be offered to reduce the risk of accelerated damage to telomeres.

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Social Cognitive Theory and Parent-Child Shared Management of Sleep: A Reformulation

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Purpose/Aims: Behavioral Insomnia of Childhood (BIC) is highly prevalent, affecting up to 45% of typically developing children and 80% of children with special healthcare needs. BIC contributes to sleep deficiency, disrupted physical and psychological health, poor school performance, behavioral dysfunction, and poor parental and family functioning. Social Cognitive Theory (SCT) is a useful framework for understanding health behaviors. The purpose of this project was to analyze and evaluate Social SCT in a pediatric sleep context and propose a reformulation of SCT to better inform pediatric sleep research.

Description of Theory: Fawcett's framework guided the analysis and evaluation of SCT. Theory analysis focuses on the theory's scope, context, and content; theory evaluation considers the theory's significance, internal consistency, parsimony, testability, empirical adequacy, and pragmatic adequacy. SCT is a middle-range theory rooted in social learning theory and emphasizes the concept of cognition in executing and changing behaviors. SCT addresses the metaparadigm nursing concepts of triadic determinism between *people, behavior,* and *environment* on the philosophical basis of human agency. Key concepts of SCT include self-efficacy, self-regulation, outcome expectation, and observational learning. The worldview of contextualism can be inferred. SCT has overall strong theoretical foundations for explaining, predicting, and changing human behavior, and demonstrates modest internal consistency, testability, and empirical adequacy. While not derived from the nursing discipline, SCT has considerable social significance and a powerful theoretical impact on nursing in empirical research. However, SCT is individually focused and does not account for interdependence within relationships. We therefore propose reformulating SCT for the pediatric sleep context by integrating parent-child shared management (PCSM). PCSM is a concept that reflects the shared responsibility and interdependence that parents and children have for managing children's health. It assumes that, with parents' ongoing support, children's responsibility for their own health management increases over time, along with developmental progression and health-related experiences. The proposed reformulated theory, Social Cognitive Theory with Shared Management (SCT-SM), accounts for parent-child interdependence and role transition.

Logic Linking Theory to Practice/Research: By including parent-child shared management, SCT-SM could inform nursing research and practice that engage parents and children in active roles in managing sleep. Such interventions could produce long-term, sustained effects on improved sleep and quality of life.

Conclusion: The reformulated SCT-SM allows nurse researchers to better understand parent-child shared management of pediatric sleep. Our research team will soon test the SCT-SM in children with juvenile idiopathic arthritis (JIA) and sleep problems. We expect that sleep intervention guided by SCT-SM will improve sleep quality, enhance communication, and boost children's capacity to manage chronic conditions. We also anticipate that the reformulated SCT-SM has the potential to generalize to other pediatric chronic conditions by providing a framework of shifting roles/responsibilities among parent-child dyads.

Supporting Transition to Practice: Mentoring to Foster Professional Resilience

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Purpose/Aim: This study aimed to explore the effectiveness of mentoring interventions for new graduate nurses (NGNs) to promote positive coping during the transition to professional practice. The study objectives were to determine the efficacy of specific mentoring interventions and if these interventions improved resilience in NGNs during the first year of nursing.

Background: Turnover of NGNs due to anxiety and burnout in the first two years remains high, according to statistics published before the COVID-19 pandemic. Mentoring relationships are recognized as beneficial to NGNs' development of clinical judgment, communication, and decreased stress. The evidence from previous epidemics and pandemics recommends increasing psychological support with a strong emphasis on peer support, positive coping skills, and self-care.

Description and Methods: NGNs were recruited from a Master's entry nursing program in the Southwest. These NGNs received resilience training throughout their nursing program. A total of 28 participants completed a baseline survey including demographics and the Connor Davidson Resilience Scale 10-item (CD-RISC 10). Participants completed follow-up surveys at 3, 6, and 12 months that included the CD-RISC 10 and rating of the effectiveness of mentoring interventions using a Likert scale. Researchers implemented four mentoring methods using a blended framework that combines integrative nursing principles and resilience skills. Mentoring methods included mentoring with trained faculty, monthly researcher-led Zoom meetings, and social media postings (one monthly peer-to-peer challenge and two monthly resilience coaching resources or messages).

Findings/Results: Repeated measures ANOVA were used to measure changes in resilience. No significant differences in NGNs resilience were measured between baseline and 1 year ($p>0.5$). CD-RISC 10 mean scores were 32 at baseline, 30.95 at 3 months, 31.13 at 6 months, and 31.7 at 12 months.

Participants used individual mentoring with nurse faculty more than peer mentoring at 3 months and transitioned to a higher use of peer mentoring than faculty mentoring at 6 and 12 months. NGNs reported that individual and peer mentoring were very or extremely effective in supporting their transition to practice (TTP). NGNs reported that monthly group sessions had variable effectiveness in supporting the TTP noting the sessions were moderately effective at 3 months and very or extremely effective at 6 and 12 months. NGNs also reported that viewing social media posts was very or extremely effective. Overall, participants primarily used active person-to-person mentoring and rated it the most effective in supporting their TTP. Over 50% of the participants reported using peer and family support, scheduling vacation time, improving sleep hygiene, and being in nature as forms of self-care activity used in the previous month.

Conclusion: Participants had an average baseline resilience score higher than comparative samples of nursing students. Further study is needed to determine the impact of resilience training within the curriculum and the effect of mentoring interventions on the overall well-being of NGNs during the first year of practice. Individual mentoring and building peer support may be essential interventions for NGNs to promote sustained resilience and successful transition to practice.

Evaluation of a Virtual Psychoeducational Support Group for People with MCI

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Purpose: This quality improvement project aimed to evaluate the adaptation and implementation of a virtual psychoeducational support group for four weeks for clients with mild cognitive impairment (MCI) at a geriatric clinic associated with a large academic institution in the Intermountain West.

Background: Approximately fifteen percent of Americans age sixty or older have MCI. Currently, there is no specific treatment for MCI. Practice guidelines recommend a treatment plan which addresses modifiable lifestyle factors, comorbidity management, neuropsychiatric symptoms, and disease progression education. Modifiable lifestyle factors such as social connectedness, physical activity, dietary modifications, and cognitive stimulation can improve cognitive function and decrease further cognitive decline. Psychoeducational support groups for individuals diagnosed with MCI effectively improve well-being, social connectedness, resilience, self-help, and satisfaction with meaningful activities.

Theoretical Framework: The Relationship of Social Networks and Social Support to Health Conceptual Model illustrates the effect social networks and social support have on health behaviors and physical, mental, and social health. This model suggests that enhancing social networks and social support can improve an individual's ability to cope with stressors, improve health, increase positive health behaviors and strengthen community resources.

Objectives: This project will assess the need for, and the desired outcomes of, the Early-Stage Social Engagement Program (ESSEP) delivered virtually for persons with MCI receiving care at a geriatric clinic affiliated with a large academic institution in the Intermountain West clinic; develop an implementation strategy, program measures, and outcomes for the ESSEP delivered virtually at the clinic; implement four sessions of the ESSEP for five clients at the clinic diagnosed with MCI and gather program effectiveness data; and evaluate the usability, feasibility, and satisfaction of clients and stakeholders with the virtual implementation ESSEP.

Methods: The need for the program will be assessed through an EHR review and examination of the geographic distribution of clients with MCI that this clinic serves. Semi-structured interviews will be conducted with healthcare partners to understand the clinic's specific needs and desired program outcomes. Data from the interview will be used to adapt ESSEP to the clinic's needs and develop an implementation strategy, program measures, and outcomes. Four of the eight ESSEP sessions will be implemented with five clients via a virtual format. Program effectiveness data will be obtained along with group participant satisfaction, usability, and feasibility data. This data will be evaluated and compiled in a final report and executive summary for healthcare partners with recommendations for the adoption of the program.

Results: This project will be conducted from October 2022 to December 2022. Data will be analyzed and compiled into a final report and executive summary from January 2023 – March 2023.

Conclusion: The success of this project may increase support and decrease healthcare barriers for people with MCI who live in rural areas of Utah and the intermountain west.

SOCIAL SUPPORT

Virtual Animal-Assisted Intervention in Children with a Life-Threatening Condition

***Anne Ingalls Gillespie**, College of Nursing, University of Colorado, Aurora, CO*

Introduction: Children and adolescents undergoing treatment for life-threatening conditions such as cancer or serious blood disorders often suffer decreased quality of life (QOL). Animal-assisted intervention (AAI) involving live visits with canines shows strong promise to improve physical and psychosocial outcomes in hospitalized children with cancer. However, AAI is not always feasible due to institutional protocols or when patient isolation is required. The emerging field of virtual AAI allows patients access to AAI regardless of setting, circumstance, or hospital protocols. Youth and Pet Survivors™ (YAPS™) is a virtual form of AAI, a pen pal program for children with life-threatening conditions to engage in visits with a dog or a cat through letter writing and photos (the humans with whom the animals live assume the personality and voice of their animal companion when corresponding with a child). A unique feature of YAPS™ not typically found in traditional AAI is that the animal pen pals have also been treated for cancer or a serious illness. Findings from a qualitative descriptive preliminary study with YAPS™ child participants supported benefits similar to traditional in-person AAI and also suggested that letter writing offers the opportunity for an ongoing friendship, a source for connection, shared experience, fun, and processing the cancer experience, all of which enhance QOL. More evidence is needed to understand how writing letters to an animal pen pal influences experiences of living with a life-threatening condition.

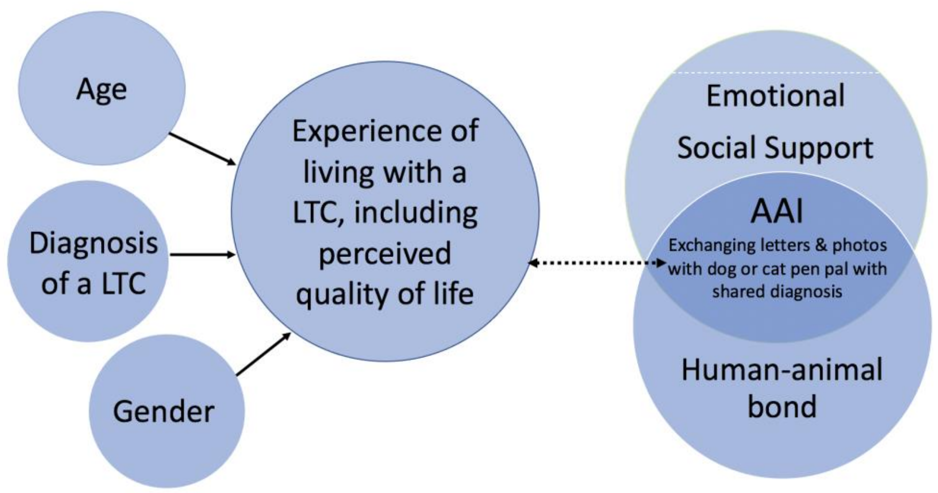
Aim: The purpose of this qualitative dissertation research is to analyze letter narratives written by children and adolescents to discern the ways in which writing to a canine or feline pen pal with a shared or similar diagnosis may influence experiences of living with a life- threatening condition and compare these experiences across age, gender, and time. A secondary analysis of interview data from children who were both in the preliminary study and have a set of letters for analysis in this study will also be examined.

Sample: 180 letters have been collected from 18 child and adolescent YAPS™ participants (nine boys and nine girls, ages 6 to 17 years old). Each set of letters are written by the same child over time, from three months to more than 4.5 years. Participants wrote a minimum of three letters and as many as 40. Twenty-three interviews from nine participants in the preliminary study are also included.

Method: A multi-dimensional thematic narrative analysis (Riessman, 2008) is being used to analyze the letter and interview narratives. This approach allows the researcher to focus on the abundance of detail contained in long sequences in the personal narratives, not just words or segments, and the context in which it is written, including the audience it was written for. This approach is both deductive and inductive in nature. A conceptual framework was designed to guide the analysis, integrating the concepts of perceived QOL, the human-animal bond, and emotional social support. Novel theoretical insights from the data are also being sought.

Results: Analysis is in progress; results will be on the poster at the conference.

Influences of Virtual Animal-Assisted Intervention with Pen Pals: Conceptual Framework



Note: LTC= life-threatening condition; AAI= Animal-assisted intervention. Age and gender are included as relevant biological variables. A diagnosis of a LTC, such as cancer or a blood disorder, disrupts quality of life, which affects experiences and perceptions of living with a LTC. AAI encompasses the concepts of emotional social support and the human-animal bond (HAB). An animal pen pal is a component in a patient's emotional social support network and an expression of the HAB. The broken line represents the bidirectional reciprocal relationship between the child/adolescent with a LTC and their exclusive dog or cat pen pal as they exchange letters and photos over time, sometimes over months or years during their illness trajectory. Virtual AAI with pen pals has an ongoing influence on experiences of living with a LTC, including perceived QOL, both during and after treatment.

SOCIAL SUPPORT

Declines in Social Support and Exercise Capacity in Breast Cancer Survivors (WF-97415)

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Purpose: This analysis sought to examine the relationship between changes in social support and declines in submaximal exercise capacity in breast cancer (BC) survivors during cancer treatment, and whether this differed from control women.

Background: The survival rates of women with BC have improved, but quality of life can be significantly impaired by treatment-induced adverse effects such as reduced exercise capacity. For example, 30% of women treated with chemotherapy experience reductions in exercise capacity, and this may be most pronounced in women receiving anthracyclines. Past studies suggest social support is a modifiable factor that may be able to mitigate the loss of exercise capacity. The literature suggests that strong social support can improve BC survivors' participation in physical activity, which could impact exercise capacity during BC treatment. However, the relationship between social support and submaximal exercise capacity, which represents the functional impact of reduced exercise capacity, in women treated for BC has not been examined.

Methods: This longitudinal cohort was comprised of 244 women with stage I-III BC and 134 cancer-free controls in the UPBEAT Study (Wake Forest NCORP Research Base). At baseline (pre-treatment in BC survivors) and 3 months, submaximal exercise capacity was obtained via 6-Minute Walk Distance (6MWD) and social support was ascertained through the MOS Social Support survey, including 4 subscales (emotional support, tangible support, affectionate support, and positive social interactions). Linear regression examined change in 6MWD (from baseline to 3-months) in relation to changes in social support in BC survivors and controls, and to examine mediation by physical activity. All models were adjusted for confounders, i.e., age, baseline 6MWD, fatigue, physical activity, physical functioning, depression, and receipt of anthracycline chemotherapy.

Assessment of Findings: Of the subscales used to measure social support, positive social interaction showed the greatest reduction during cancer treatment in BC survivors. We observed a statistically significant difference in the association between change in positive social interaction, a component of social support, and change in 6MWD from baseline to 3-months between women treated for BC and controls (p_{int}=0.015). Whereas there was no association between positive social interaction and 6MWD in controls (=-9.4; p=0.334), in BC survivors decreased positive social interaction was associated with decreased 6MWD, after adjustment for confounders listed above (=22.5; p=0.010). We did not detect evidence to suggest that the relationship between positive social interaction and 6MWD was mediated by physical activity.

Conclusions: This is the first study to document the association between a decrease in positive social interaction experienced during BC treatment and reduced exercise capacity at 3-months in women treated for BC. Though our findings will require confirmation, they suggest the importance of attending to women's needs for positive social interactions during BC treatment. Moreover, given the persistence of associations between positive social interaction and 6MWD after adjustment for confounders, research is needed to further examine the connection between social support and adverse outcomes in breast cancer survivors, including investigation of the pathways through which social support influences submaximal exercise capacity among BC survivors.

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Effects of Support Systems on the Mental Health of Nursing Students during COVID-19

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Background: Mental Health has been declining over the last two years, coinciding with the COVID-19 pandemic. A person's support system can either improve or worsen their mental health. Support systems for the purpose of this study include negative, positive, and instrumental support. Mental health in this study includes depression, anxiety, and stress. Through the review of literature, nursing students have been experiencing these diagnoses even prior to the pandemic. Nursing students have been severely impacted by COVID-19 and their support system can impact their mental health.

Objectives: This study used the depression, anxiety, and stress scale (DASS) and the social support scale to measure the effects of a positive and negative social support system on undergraduate nursing students at The University of Colorado (CU) during the COVID-19 pandemic.

Methods: Correlations were used to examine the relationships between stress, anxiety, and depression and support systems among undergraduate nursing students at CU. Data were collected from students, prior to the start of their program through a pre-course survey. One survey included the DASS with 21 statements and another survey included the social support scale with 11 statements. Established and validated tools were used in both surveys to evaluate levels of stress, anxiety, depression, and social support. Exclusion criteria included students who did not complete the entire survey.

Results: The analysis included 45 responses from the DASS survey given during Winter of 2021.The analysis included 99 responses from the social support survey given during Winter of 2021. 100% of participants who completed both surveys, DASS and social support, were included in the analysis. 17.8% of participants scored with severe or extremely severe anxiety. 6.7% of participants scored with severe or extremely severe depression. 20.0% of participants scored with severe or extremely severe stress. The average score for instrumental support was M = 4.24 (SD = 0.58), out of five. The average score for positive support was M = 4.32 (SD = 0.76), out of five. The average score for negative support was M = 4.00 (SD = 0.85), out of five. The correlational analyses supports a positive relationship between negative support and stress (r = 0.21) and a positive relationship between negative support and anxiety (r = 0.18).

Discussion: These results support that the COVID-19 pandemic has impacted the mental health of undergraduate nursing students at CU. The results show stress being the most common poor mental health outcome (20.0%) among the participants. The results indicate nursing students having a strong positive and instrumental support system in place. The negative social support scores were reversed scored, so the results show a low average of negative social support. The positive correlation between negative social support and stress and anxiety indicates the effects of a negative support system on a student's mental health. There was not a strong positive correlation between negative social support and depression.

Grieving the Loss of a Child; A Descriptive Survey Study of Online Grief Support

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Background: The loss of a child is devastating and isolating. Complicated grief symptoms include mental health conditions, sleep disturbance, and social impairment (Bryant et al., 2014). Risk factors for complicated grief include female gender, traumatic/sudden death, and younger age of deceased (Harper et al., 2014). Protective factors include being a caregiver prior to death and openly expressing the death in the first 6 months (Price & Jones, 2015). Social support helps to reduce incidence of complicated grief (Song et al., 2021). One can find online social support in the form of grief support communities.

Aim: The aims were threefold: 1) describe types of online grief support, accessing behaviors, and feeling supported, 2) describe psychosocial and emotional aspects of those grieving the loss of a child and, 3) determine if those who feel more supported show improved health outcomes.

Methods: This online survey study recruited a convenience sample of adults grieving the loss of a child using Twitter, Facebook, and online forums. Survey questions asked participants about the types of online support they access, how often they access, and how supported they feel. The dependent variables included level of feeling supported, frequency of access, and total number of supports. Independent variables included PROMIS® (Patient-Reported Outcomes Measurement Information System) measures: sleep disturbance, cognitive function, depression, anxiety, and self-efficacy to manage emotions (SEMA). Data was collected May through September 2018.

Results: All 31 participants were women (100%), mostly Caucasian (97%), and mean age was 43.2 (SD=10.2). Time-since-loss ranged from 17 days to 26 years. Fifteen (48%) participants provided care for the deceased child prior to death. Most commonly, participants used a smart phone (n=25, 81%) to access two supports (range 1 to 8) daily (n=15, 48%). They mostly accessed closed Facebook groups (n=23, 74%) and felt supported (64.8, SD 25.4). This sample of women's T scores for the PROMIS® measures (M=50, SD 10) were higher in level of sleep disturbance (59.4, SD 6.1), depression (62.1, SD 6.1), and anxiety (62.8, SD 7.9). They scored lower in cognitive function (37.4, SD 7.3) and SEMA (39.3, SD 5.7). Those who accessed online supports more often, felt more supported (p=0.004). After categorizing emotional support due to small sample, a binomial regression was performed. Those who were not former caregivers and felt higher levels of emotional support, scored higher on SEMA ($\chi^2 = 8.3$, p=0.016).

Conclusions/Implications: Findings from this study are similar to previous research and, despite a small sample size in this difficult-to-access population, they highlight important new findings. Similar to other studies, participants were mostly female, with a large variation in time-since-loss. They were still accessing online grief supports frequently with high reported levels of emotional support. Participants reported symptoms of complicated grief including depression, anxiety, reduced cognitive function, decreased SEMA, and disturbed sleep. New findings show that for those who were not caregivers, online grief support may be protective for SEMA. These findings will help to guide the design of grief support interventions for child loss.

Peer Social Support's Effect on Health Outcomes in Older Adult Immigrants

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Purpose: This systematic review of the literature review seeks to examine the effect of peer support on mental and physical health of older adult immigrants and refugees.

Background: As the US population ages and becomes increasingly diverse, there is a need to address the unique needs of immigrants and refugees aging in the US. Social isolation is a factor for poor health, morbidity and mortality, and is associated with poor life satisfaction, depression, dementia, and physical health and wellbeing. Older immigrants and refugees represent a group at high-risk for social isolation due to lost relationships and social ties. Peer social support may influence mental health and psychosocial wellbeing through positive social interaction by improving the connection between the older adult immigrant to a community of peers. There is a need to examine social support as an intervention to address the health needs for this population.

Methods: This study is a systematic review of the literature using Pubmed data base. The search strategy included Boolean search terms including "peer social support" AND "older adults" AND "immigrant" of studies published within the past 10 years. Criteria for inclusion were peer-reviewed intervention studies using qualitative, quantitative, and mixed-methods with samples including older adult immigrants or refugees over 50 years of age. Content analysis of qualitative and quantitative findings were examined for common themes.

Results: This review includes 6 studies. The initial search yielded 46 results, with 30 articles were immediately excluded based on the relevance of the titles. Further 16 articles were evaluated and screened, and only 6 articles remained due to age of the subjects and relevance of the studies. Methods included two randomized controlled trials and one-single arm prospective study. Overall, these studies suggest that social interaction and peer social support increase the quality of life of older adult immigrants. Commonly measured health outcomes include depressive symptoms, anxiety, loneliness, life satisfaction, and physical health. Interventions included Adult Day Service programs, peer support through home visits and phone calls (addressed problem solving, promoting community resource sharing), peer navigator program, and a group-based health promotion program. Findings include increased life satisfaction in immigrants receiving peer support, reduction in depression and anxiety symptoms with peer support.

Implications for Further Research: This study highlights key areas for future research and the need for high-quality randomized controlled trials examining the effect of peer support in the underserved population of older adult immigrants and refugees. Particularly, further research is needed regarding peer support's impact on cognitive health and dementia. The results reflect limited available studies on peer social support among older adult immigrants and refugees and show the importance of examining immigration status as an underserved and understudied population. There is a need for intervention research to examine disparities in social isolation and social support interventions beyond race and ethnicity or foreign-born status to inform research, program, and policy development in promoting health equity.

Reflective Sessions to Reduce Burnout Among New Graduate Nurses

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Background: Burnout affects many healthcare providers, including registered nurses (RN's). Particularly, new graduates who work in high acuity settings, such as a pediatric bone marrow transplant (BMT) and oncology unit, are at high risk for experiencing job-related burnout. The reasons for high burnout rates are multifactorial. First, nurses who work in higher acuity settings are more exposed to patient deaths and suffering. Second, the COVID-19 pandemic led to higher workloads, increased patient acuity, and higher levels of moral distress among RN's in the inpatient setting. Third, new graduate nurses experience higher rates of job-related burnout due to their inexperience at handling stressful work situations and a lack of effective coping skills. Thus, new graduate nurses in a pediatric BMT setting amidst the COVID-19 pandemic experience high levels of anxiety and stress related to burnout on the job. Furthermore, burnout can lead to several negative consequences, such as poor individual health outcomes, high job turnover rates, negative patient outcomes, and poor organizational revenue. Although psychological health is affected by prolonged feelings of job-related burnout, those who suffer from burnout have higher rates of physical symptoms, such as headaches, gastrointestinal disorders, and hypertension. Burnout can also lead to high job turnover rates, which in turn, can affect hospital staffing, nurse-to-patient ratios, and organizational revenue. Short staffing can lead to an increase in the number of patients assigned to each nurse at the inpatient setting, leading to higher workload and expectations, less time to double check medications between different patients, and an increase in medical errors due to time constraints. All of these can contribute to poor patient outcomes. As a result, feelings of burnout among new graduate nurses must be addressed. Therefore, evidence-based interventions or strategies should be implemented to alleviate burnout among nurses, especially those in high acuity units.

Objective: To implement an evidence-based reflective session to reduce burnout among new graduate nurses in a pediatric BMT unit at a children's hospital in California.

Methods: This is a Doctor of Nursing Practice (DNP) project**.** The project includes weekly, 30-minute long, experienced nurse-led reflective sessions for eight weeks to help reduce burnout of new graduate nurses with less than 3 years of work experience in a pediatric BMT unit. Feelings of burnout will be measured by Maslach Burnout Inventory, a 22-item scale, at baseline and at the end of the sessions. Participants will be asked to evaluate their satisfaction with each session and provide feedback on reflective sessions via open-ended questions. All de-identified collected data will be analyzed using descriptive statistics. Thematic analysis will also be used to summarize experiences of participants and comments to improve the reflective sessions.

Results: The project will be implemented in the next few months. The results will be presented at the conference.

Conclusion/Implication: The findings from this project may show reduced burnout among new graduate nurses, improve individual health, and increase job satisfaction. Ultimately, this project may be effective to improve organizational revenue by reducing new graduate nurses' job turnover as well as improving patient outcomes.

Using Photos to Improve the College Experience of Indigenous BSN Students

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Purpose: To create a sense of place for American Indian and Alaska Native (AI/AN) nursing students by installing a photographic exhibit highlighting AI/AN nurses through history in the Mark & Robyn Jones College of Nursing.

Background: Enrollment of American Indian and Alaska Native (AI/AN) students in higher education has historically been low. Currently, around 19% of AI/AN students enroll in college, compared to 42% of white students and 39% of AI/AN students complete the 4-year degree compared to 62% of white students. Influential Native American nurses are overlooked as part of the historical foundations of the nursing profession. Based on the publication by Morris (2022), the authors were inspired to enhance the historical line-up of White and Black influential nurses with Native American nurse leaders. This project is a part of the Caring for Our Own Program (CO-OP), which has been successful in increasing the enrollment, retention and graduation of AI/AN nurses.

Methods: The 13 most influential Indigenous nurses identified by Morris (2022) were narrowed to those for whom copyright permission could be obtained or purchased and a high resolution photograph was available for a wall-poster size reproduction. In some cases, photographs were unavailable, unclear, or otherwise unable to be printed. The exhibit will be placed in a classroom, alongside the photos of the more famous historical nurses, already displayed in the building.

Results: Permission to reproduce photos was obtained for Elizabeth Sadoques (Abenaki), Virginia Rosebud Sneed Dixon (Eastern Band of Cherokee Indians), Susie Walking Bear Yellowtail (Apsáalooke/Crow), Betty Mae Tiger Jumper (Seminole), and Lula Owl Gloyne (Eastern Band of Cherokee Indians).

Implications: Creating a sense of place and belonging for AI/AN students at Montana State University is not an isolated act but an ongoing commitment to improving the classroom and clinical environments where future nurses are educated. By recognizing the contributions of AI/AN nurses we can make incremental change toward diversifying the workforce. Most AI/AN nursing students come from one of the seven reservations in Montana, and when they graduate, many will return to their communities for their careers where they will serve as role models to younger generations and help address health equity across Western communities.

Morris, G. (2022) Native American and Indigenous nurses you should know about. Nurse Journal. Available online: https://nursejournal.org/articles/influential-native-american-nurses/

TOPICS IN DIVERSITY

An Exploration of an Academic Diversity Partner Role in Nursing

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Aim: To explore an academic diversity partner (ADP) role in nursing with a reflective case study method.

Background: National health and healthcare disparities have existed in the United State since its creation. Complicated, multifaceted causes of health inequity have been identified; racism is typically listed among them. Internal and external social events, movements, and data pushed Montana State University (MSU) and Mark and Robyn Jones College of Nursing (MRJCON) to address academic or professional inequity through various diversity and inclusion activities. In 1999, MRJCON founded the Care for Our Own Program (COOP) to provide guidance and assistance to American Indian/Alaska Native pre-nursing and nursing students. Recently, MRJCON has started implementing a holistic admission and an undergraduate curriculum revision to meet AACN standards for improve health equity. Additionally, MSU created a position for a Senior Diversity and Inclusion Officer who negotiated with MSU president to create an ADP position in each college. This ADP would receive .2 FTE for a 2-year term though diversity, equity, and inclusion (DEI) experts recommended a .5 FTE position.

Brief Description of the Undertaking: Initial ADP's responsibilities at MRJCON include 1) act as a liaison between university and college; 2) assess the college DEI efforts (e.g., data gathering); 3) coordinate DEI learning opportunities; 4) support integration of inclusive practice (e.g., teaching, hiring, & review); and more. While attending weekly ADP meetings, all ADPs struggled to understand and define their new roles in each college. To address this, the MRJCON ADP consulted with a senior officer, dean, and faculty, and developed a MRJCON DEI Framework, modeled after the MSU Framework. This framework listed a total of 14 goals and 30 activities to be undertaken in the MRJCON for the next five years. Two goals and five activities were selected to be completed in the next two years. For her part, the ADP reviewed *all 26* new courses in the curriculum revision by *using two matrixes of the curriculum threads and the domains and competences related to DEI concepts to* contribute to the college efforts (in-progress). It was a timely task as well as an opportunity for the ADP to reach individual faculty directly or indirectly. Along with other requirements, she promoted their internal changes of attitude and implicit biases.

Lessons Learned:

1. Development of MRJCON DEI Framework was the key to organize and coordinate the DEI efforts in the college where five campuses exist. Collection of DEI efforts and data mutually encouraged college as a whole and individuals, especially the ADP.
2. Depending on goals of the year, even a faculty ADP, not an administrator ADP, can contribute to the progress on DEI efforts although it took over a year to identify a comfortable position.
3. Annual report to the dean has improved from summaries of weekly activities to format using the MRJCON DEI Framework.

Conclusions: Any systemic DEI efforts would make progress as little or as much as planned. Visibility, continuation, collaboration, and patience are critical.

Creation of a Transgender Toolkit to Enhance Rehabilitation of Incarcerated Persons

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Purpose: The purpose of this project is to gain understanding of lived experiences and gender affirming care needs of transgender persons to improve self-efficacy and access to care through the development of an educational resource to enhance of understanding policies and procedures during incarceration.

Background: There is limited research and data collection about the lived experience of transgender persons. Existing evidence suggests that transgender persons in the general population have increased health and psychological risks. Vulnerability of transgender people is amplified during incarceration due to safety concerns and lack of specialized healthcare.

Method: Mixed method design with longitudinal data collection was used. Demographic survey with self-efficacy scale (SES) and focus groups were conducted with transgender persons at prisons. Focus group sessions utilized guided questions regarding perceptions about barriers healthcare, property, and searches during incarceration. Information collected was used to develop toolkit distributed with post intervention surveys will be analyzed to assess changes to self-efficacy scores.

Results: N=41participants at 4 prisons in Washington State. Sex assigned at birth was 75.6% female, 21.9% male and 2% intersex and gender identity were 65.8% transwomen, 14.6% transmen, 12.2% nonbinary, and 2.4% cismen. Time incarcerated ranged: 4.9% (< 2 years), 31.7% (2-5 years), 22% (6-10 years) 36.8% (11-20 years), 9.8% (21-30 years) and 4.9% (>30 years). Sentencing for participants was 17.1% (2-5 years), 7.3% (6-10 years), 26.8% (11-20 years), 17.1% (21-30 years), 9.8% (31+ years) and 17.1% (life sentence). Highest level of education ranged: 4.9% < high school, 22% GED, 9.8% high school, 34.1% some college, 7.3% trade school, 14.6% associate degree and 4.9% bachelor's degree. Participants reported 65.8% foster care during childhood. Homelessness was reported among 80% of participants. There was 68.3% of participants currently mental health treatment with 73.2% history of suicide. Average number of suicide attempts was 5. General SES ranged from 30- 32 at each prison with potential score of 10-40. Themes generated from focus group discussions included needs and concerns regarding gender affirming healthcare, housing and safety, DOC classification system, disapproval and rejection related to gender status, alienation, and limited access to information.

Discussion: This project utilized both quantitative and qualitative methods to gain understanding of the lived experiences of incarcerated transgender individuals. Findings from this project substantiate information found literature that indicates transgender individuals have increased risk of deteriorating health outcomes due limited gender affirming care and mental health conditions. Key findings from this project include high rates of history of suicide, homelessness, and history in the foster care system. Quantitative demographic survey data suggests that social determinates of health factors may correlate with incarceration and recidivism. Qualitative data from focus groups provided framework for information toolkit that was created as a guide for transgender persons to navigate their incarceration.

Conclusion: Transgender individuals have legal rights identified in state specific laws guided by the US Constitution. Healthcare providers have ethical obligations to advocate for vulnerable populations to ensure care needs are met. A toolkit serves as an educational resource that can improve self-efficacy and increase resilience while enhancing rehabilitation.

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Needs Assessment, Student Success Programs for Racially/Ethnically Diverse Students

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Purpose/Aim: The aim of this project was to determine the availability of student success resources for racially and ethnically diverse students and develop evidenced-based practice recommendations to improve their success at the University of Utah (U of U) College of Nursing (CON).

Background: The lack of diversity in the nursing workforce contributes to health disparities. To help the nursing workforce be more reflective of the population served, there is a push nationwide to increase the number of racially and ethnically diverse students in pre-licensure nursing programs. Registered nurses in Utah do not reflect the racial and ethnic diversity in the state. In 2020, Utah's population consisted of Hispanic/Latino/Spanish 14.2%, Black/African American 1.7%, Asian 2.7%, American Indian 1.5%, and Native Hawaiian 1.1%. However, the percentage of registered nurses in Utah who are Hispanic is 2.8%, Black/African American 0.2%, Asian 2.0%, American Indian 0.4%, and Native Hawaiian 0.1%. A contributing factor to this problem is that racially and ethnically diverse nursing students often lack the right resources and support to help them succeed in college. Student success programs (SSP) have been established to address this need. It is unknown if the University of Utah's racially and ethnically diverse pre-nursing students' needs are being adequately addressed by these programs.

Approach/Methods: The Social-Ecological Model provides the framework for this project to understand racially and ethnically diverse students' complex needs between individuals, relationships, communities, and societal factors. A semi-structured guide was developed to identify the needs, adequacy of resources and support, attitudes, perspectives, and experiences in SSPs. Discussion groups and individual interviews are being conducted with students, alumni, educators, and administrators in three SSPs that support pre-nursing students and administrators working within the multicultural student services. Discussions and interviews are recorded and transcribed and will be analyzed to identify categories and descriptions of experiences. Demographic data from all participants will be described using descriptive statistics.

Assessment Findings/Outcome Achieved: An executive summary will be developed from national and current project findings to guide recommendations for stakeholders at the U of U CON. Detailed recommendations will be made to improve SSPs for racially and ethnically diverse pre-nursing students. Stakeholders' intent to adopt specific recommendations will be assessed and included in the final executive report.

Conclusion: This needs assessment will provide necessary data for the U of U CON to develop a new SSP or to tailor current SSPs to meet the needs of racially and ethnically diverse students. Identifying and providing the appropriate resources and support to racially and ethnically diverse students is a cornerstone to improving the diversity of the nursing workforce and addressing health disparities.

Support Group for African American Women Exposed to Gendered Racism

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Purpose: This quality improvement project proposes to examine the effect of a homogeneous support group on promoting the use of effective africultural coping strategies and attitudes about attending a predominantly White institutions in African American women exposed to gendered racism.

Background: Many African American women experience a combination of racial and gendered discrimination. Racism and discrimination have been shown to have a negative effect on mental and physical health of African Americans. Researchers have argued that utilizing africultural coping strategies for African Americans experiencing racism can have a protective function against the negative effects on mental health such as anxiety and stress.

Methods: The homogeneous support group will run for 7 weeks with 90-minute in person sessions. The topics in the group include africultrual coping strategies culture/ race/ethnicity/ and microaggressions related to the experience of gendered racism. The Africultural Coping Systems Inventory (ACSI) and the Gendered Racial Microaggressions Scale (GRMS) will be used to assess the impact of the intervention on the participants. The ACSI scale is to measure the specific africultural coping strategies employed by participants to manage stress. The GRMS measures the frequency and stress appraisal of the intersection of racial and gender microaggressions experienced. Attitudes regarding attending a predominantly White university and college retention will be measured before and after the intervention of the group. Pre and Post intervention scores of the ASCI and the GRMS will be compared using a repeated measures ANOVA test. Descriptive statistics will be used to report student attitudes and college retention. Local data reveals retention rates for African American women to be 71.4% and 79.3 % for White students in a predominantly White university.

Expected Outcomes: Completion of the data collection and analysis is expected March 2023. It is anticipated that the homogeneous support group intervention will increase the use of effective africultural coping strategies and maintained college retention for the group participants. The project will offer healthcare providers insight into culturally specific coping strategies of African American women and may increase the use of homogeneous support groups as a viable mental health strategy for African American women attending a predominantly White university.

Implications: Previous research has determined that africultural coping strategies can have a protective function against the negative effects of racism and discrimination. The project proposed that teaching africultural coping strategies to Black/African American women in a support group setting will result in them retaining and persisting to graduation.

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System Barriers to Implementing a Program-Wide Project to Address Bias

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Purpose: The purpose of this project was to design and integrate an evidence-based program to develop bias-interrupting habits among undergraduate nursing students in all clinical nursing courses throughout their Bachelor of Science in Nursing (BSN) or Accelerated Bachelor of Science in Nursing (ABSN) program.

Background: New national accreditation standards and state laws require nursing education programs to graduate students with competencies to address racism and interrupt bias. To our knowledge, no program or approach exists that requires students to demonstrate bias-interrupting skills in health care settings. IBIAS™ was developed to address this gap. It is a multi-faceted, evidence-based program that conceptualizes implicit bias among nurses as an urgent patient safety issue. The program seeks to reduce health disparities by preparing future nurses who have developed habits to 1) consider how bias may be impacting the care they provide, and 2) implement bias-interrupting skills they have demonstrated throughout their clinical nursing education once they enter the workforce.

Methods: IBIAS™ was iteratively and collaboratively developed from August 2020 – September 2021 using equityXdesign principles that center racial justice with more than 30 stakeholders. During academic year (AY) 2021-2022, IBIAS™ was piloted with eight volunteer clinical instructors in 14 clinical nursing course sections that included 112 A/BSN students (not all unique). After real-time iterative improvements based on pilot data, IBIAS™ was launched in all A/BSN clinical courses starting AY 2022-2023 (Fall Quarter included 3 clinical courses, 28 clinical sections, and 224 A/BSN students).

Outcomes: Despite widespread involvement of more than 50 stakeholders and significant support across all levels of School of Nursing leadership, several elements of organizational systems proved to be substantial barriers to implementing a standardized program to address bias. System barriers included disconnected and/or duplicate communication channels, significant university-level onboarding difficulties and/or backlogs that delayed completion of subsequent required tasks, an inability to effectively track and hold clinical instructors accountable for not completing required training on time and/or correctly implementing IBIAS™ into their clinical courses as designed.

Conclusions: System inefficiencies at the course/track, department, school, and university levels must be addressed first if nursing education programs are to evolve to meet new state and national requirements to address racism and bias in nursing care.

Funding: This project is funded by the Gordon and Betty Moore Foundation through Grant GBMF9048 to support the work of Dr. M. Rebecca O'Connor.

Efficacy of Promoting First Relationships for English and Spanish Speakers

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Purpose/Aims: To investigate if preferred language, self-identified ethnicity, and nativity moderate the effect of *Promoting First Relationships®* (PFR) on parenting and infant outcomes among Spanish- and English-speaking mother-infant dyads.

Background: PFR is an established, evidence-based home-visiting parenting program delivered by nurses and other professionals from related disciplines. This paper reports findings from the first clinical trial of PFR in Spanish. Native speakers on our research team interpreted and translated the PFR materials from English into Spanish, and study participants received a PFR provider fluent in their preferred language of English or Spanish. PFR was already otherwise versatile and granted providers flexibility to adjust the program to diverse cultural contexts. The primary aim of this clinical trial was to test the main effect of PFR on parenting and infant outcomes (previously reported; PFR was effective at improving parenting sensitivity, caregiver understanding of infant/toddler social-emotional needs, and infant externalizing behavior). Testing moderation by language was a secondary aim of the trial. This paper reports on these moderation analyses. This paper also reports on follow-up analyses of moderation by ethnicity and nativity, conducted to understand potential nuances about PFR's effectiveness based on multidimensional ways mothers identified.

Methods: Participants included 252 mother-infant dyads (baseline infant age 6–12 weeks) recruited based on receiving a prenatal mental health referral from a Federally Qualified Health Center. Dyads were randomized to the PFR or a control condition and received the condition in their preferred language (English or Spanish). Measures were collected at baseline (T1), immediately post-intervention (T2/infant age 6 months), and 6 months post-intervention (T3/infant age 12 months). Primary outcomes included parenting sensitivity, dyadic synchrony, caregiver understanding of infant/toddler social-emotional needs ("caregiver understanding," for brevity), and maternal confidence. Secondary outcomes included infant difficultness and social-emotional functioning. Analyses tested PFR-by-moderating variable interactions for preferred language (Spanish, English), self-identified ethnicity (Hispanic, non-Hispanic), and nativity (non-US-born, US-born).

Outcomes: Effects of PFR by the three moderating variables were similar for all outcomes, except for T3 caregiver understanding. On this outcome, PFR was more effective among mothers preferring Spanish (d = 0.69) than English (d = 0.40), among mothers self-identifying as Hispanic (d = 0.58) than non-Hispanic (d = 0.36), and among mothers born outside of the US (d = 0.61) than in the US (d = 0.40).

Conclusion/Implications: Findings indicate that nurses may leverage PFR to support parenting and infant outcomes in Spanish- and English-speaking families. With the exception of T3 caregiver understanding, PFR demonstrated similar magnitudes of effects across the language, ethnicity, and nativity groups. On T3 caregiver understanding, however, mothers who preferred Spanish (v. English), self-identified as Hispanic (v. non-Hispanic), and were born outside of the US (v. born in the US) experienced greater gains. A promising prospect for future study is that such greater gains could, from a life-course perspective, extend long-term benefits and contribute to reducing health disparities.

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Conceptualizing the Vulnerability of Transgender and Gender-Diverse Older Adults

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Purpose: To present a systematic review of health-related experiences of transgender and gender-diverse (TGD) older adults using the Vulnerable Populations Conceptual Model (VPCM).

Background: TGD people experience higher rates of chronic conditions, decreased quality of life, and poor access to care. While there is a clear relationship between poor health outcomes and discrimination among TGD people, the intersection between TGD identity and older age in producing vulnerability is poorly understood. VPCM is a population-based model that highlights the relationship between resource availability (i.e., social status, social capital, and human capital), relative risk (i.e., risk of poor health associated with access to resources), and health status (i.e., morbidity and mortality) in identifying vulnerable populations. Understanding how TGD older adults lack resources, experience relative risks, and face poor health status are critical in addressing their vulnerability.

Methods: A systematic literature review was conducted using PRISMA. CINAHL, PubMed, Medline, and PsycINFO were searched to locate studies that explored available resources, relative risks, and the health status of TGD adults 50 years and older. All the articles included were in English, peer-reviewed, and published between January 2017 and June 2022. A team-based approach with community advisory board members was utilized in evaluating the studies included. The study team was composed of a queer-identifying gerontology nurse practitioner, a patient advocate, a social worker, a health educator, and an associate professor. Two team members are people of color, three are of TGD experience, and all are experienced in providing care to and working with members of the TGD community.

Findings: A total of 756 articles were initially identified. After removing duplicates and assessing against inclusion and exclusion criteria, 17 articles were retained. None of the studies were from a nursing journal. Using the VPCM, TGD older adults were identified as a vulnerable population. Access to income, education, employment, healthcare, and social connection are essential resources for TGD older adults. Limited availability and access to such resources increase their risks of stigma, violence, discrimination, substance use, self-harm, and suicide. While using healthcare services can reduce their relative risks, negative health-related experiences create barriers to care. The lack of resources and increased exposure to risk factors also produce poor health outcomes, including increased rates of depression and anxiety, disability, multiple chronic comorbid conditions, intimate partner violence, and poor quality of life.

Conclusion and Implications: Identifying TGD older adults as a vulnerable population demonstrates the unique needs of this community while underlining the critical role of nurses in addressing such vulnerabilities. In nursing education, advancing the nursing curriculum is needed to meet the unique healthcare needs of TGD older adults. This can be accomplished by integrating TGD health-related content, didactic learning, and practice reasoning to contextualize patient situations through simulation learning and clinical reflections. In nursing practice, the findings called for advocating for safe and gender-affirming healthcare settings. Finally, limited literature on TGD older adults in nursing research emphasized the need for participatory approaches when co-creating knowledge with the TGD community.

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Primary Care Education on LGBTQ+ Health

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Purposes/Aims: To understand how direct provider education may change rudimentary knowledge, attitudinal awareness, and clinical preparedness of providers in working with the LGBTQ+ population.

Rationale/Background: *LGBTQ+* encompasses individuals who identify as lesbian, gay, bisexual, transgender or transsexual, queer, question, or who identify with other aspects of the sexual or gender spectrum. The plus sign at the end of this term is utilized to include additional minorities not included in the abbreviation, including but not limited to intersex, asexual, and pansexual individuals. The LGBTQ+ community is a health disparate population in comparison to their straight and cisgender counterparts. Healthcare providers are well-positioned to promote inclusive healthcare environments to improve the health equity of the LGBTQ+ community. The Meyer's Minority Stress Model serves as the theoretical framework to guide this project's design to better understand the relationship between minority stress and negative health sequelae. The model emphasizes the importance of reducing the impact of distal stressors to reduce minority stress, such as through the adoption of inclusive attitudes and practices in healthcare. *LGBT-DOCSS:* The Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS) is an inter-disciplinary clinical self-assessment for health and mental health providers that includes measurements of knowledge, attitudinal awareness, and clinical preparedness.

Methods: *Sample:* Active primary care providers of Southwest Washington state.

Before Intervention: Providers will complete a consent, demographic survey, and the LGBT-DOCSS pre-assessment.

Intervention: An educational session will be provided for 1 hour on a live virtual platform. The education will cover general LGBTQ+ terminology, extent of local health disparity, and inclusive communication strategies and practices within the primary care setting. This will include interactive questions and case studies.

Post-Intervention 1: Immediately after completing the final educational seminar, providers will be provided a Qualtrics link and be asked to fill out the LGBT-DOCSS post-assessment.

Post-Intervention 2: Each provider will be asked to complete a final LGBT-DOCSS assessment 8-12 weeks after education completion date.

Assessment/Outcomes: Results from the Qualtrics surveys will be downloaded and analyzed utilizing SPSS software. Demographic data will be displayed utilizing a descriptive statistics frequency chart. Results from LGBT-DOCCS instrument will be organized and analyzed utilizing repeated ANOVA analysis. Higher mean scores will indicate higher levels of rudimentary knowledge, attitudinal awareness, and clinical preparedness. Results of project to be determined in Spring 2023.

Conclusions: Outcomes of this project will add to the greater knowledge of the effects of direct provider education and may inform future research and qualitive improvement project efforts. It may also inform and encourage healthcare entities of a need to incorporate continuing education regarding the LGBTQ+ communities to improve health equity.

Keywords: LGBTQ, Health Equity, Cultural Competency

RESEARCH & INFORMATION EXCHANGE POSTERS

The Research & Information Exchange (R&IE) includes posters by faculty, students, and nurses in clinical practice. These posters have been submitted by WIN member organizations and have not been peer-reviewed by WIN.

ARIZONA STATE UNIVERSITY
EDSON COLLEGE OF NURSING AND HEALTH INNOVATION

Patient-Physician Race Concordance and Maternity Outcomes
Kadeeja Murrell

Through Alzheimer's Eyes: A Virtual Pilot Intervention for Dementia Caregivers
Abigail Gomez Morales

Patient Experiences with Healthcare Provider Communication During a Pregnancy Loss
Laura Tanner

Compassion Fatigue Among Behavioral Health Workers: A Trauma-Informed Care Approach
Nneka Onyia, Ann Guthery

Innovating Wound Care Education: Video Solutions for Health Equity Challenges
Michelle Raney, Heather Ross

View to ReCOUP: Video Education to Reduce Complications of Opioid Use Postoperatively
Katherine Brown, Nancy Denke

Food Equity for All: Closing the Food Insecurity Gap in Vulnerable Communities
Kimia Robinson, Heather Ross

Teen Mental Health Literacy: An Arizona School Districts Post-Pandemic Crisis Response
Christina Jones, Zita Schiller

Identifying Sexual Dysfunction in Women with Cancer During Treatment and into Survivorship
Vanessa Sbordoni, Patricia Janicek

Communication Strategies for Informal Caregivers of Persons Living with Dementia
Gemma O'Donnell

The MEPN Journey: Bringing Acquired Knowledge into Nursing
Judith Mueller, Gerri Lamb, Bronwynne Evans, Eve Krahe Billings

Inpatient Stroke Education and Measuring Prescription Filling for Stroke Survivors
Mikaela Atkins, Michelle Morgan, Tiffany Sheehan

BOISE STATE UNIVERSITY SCHOOL OF NURSING

Nursing Perceptions on Delirium Assessment and Management: A Scoping Review
Nicolette Missbrenner, Yunchuan Lucy Zhao

BRIGHAM YOUNG UNIVERSITY COLLEGE OF NURSING

Why Do Nursing Faculty Leave Academia?
Chase Owens, Matt Anderson, Thomas Rowley, Noelle Taylor

Data Organization for Decision Making about Delphi Panelists
Abigail Lee, Sarah H. Davis, Deborah O. Himes

CHAMINADE UNIVERSITY OF HONOLULU SCHOOL OF NURSING AND HEALTH PROFESSIONS

Enhancing Faculty Well Being and Recognition in a University Setting
Elsie Crowninshield

Palliative Care Efforts in Hawaii: A Partnership Approach
Rhoberta Haley, Daniel Weiss, Sandra Bourgette-Henry

CHILDREN'S HOSPITAL COLORADO

Changing the BMT Diet
Debra Southworth

Evaluating an Evidenced Based Practice Workshop Program: A Multimodal Approach
Alyssa Alfieri, Cassie Lang, Figaro Loresto

RAPID – Recognition and Prevention of In-Hospital Deterioration
Mariam Conant, Meghan Burke, Elise Rolison, Fidelity Dominguez, Justin Lockwood, Richelle Koehler, Gina Whitney, Joe Grubenhoff, Sarah Nickels

HOAG MEMORIAL HOSPITAL PRESBYTERIAN

Are Nurses Motivated to Be Innovators Following a Virtual Innovation Workshop?
Lynette Low, Ahlam Jadalla, Kimberly Mullen, Rick Martin

IDAHO STATE UNIVERSITY SCHOOL OF NURSING

EHR Alerts for Diabetic Guideline Compliance in a Free Clinic
Michelle Miles, Kristy Crownhart

Elevated Blood Pressure in the Urgent Care: A Quality Improvement Project
Rebecca Gomez, Melody Weaver

Managing Life with a Broken Heart:
An Experiential Journey into Adult Congenital Heart Disease
Kristy Gonder, Gina Clarkson

Shared Decision Making for Methamphetamine Recovery
Jalyn Stinardo, Vernon Kubiak, Lynnel Cote, Mary Goodspeed, Susan Tavernier

INTERMOUNTAIN HEALTH

Patient & Visitor Perpetrated Sexual Harassment
Sallie Calder

The Impact of Abdominal Binders on Opioid Use & Post-Operative Pain After Cesarean Birth
Corie Hoskins, Amy Dempsey

Improving Intrapartum Glycemic Control Using a Software-Driven Insulin Protocol
Katie Reese

Intimate Partner Violence (IPV) Screening and Intervention in Outpatient Setting
Gena Christensen, Audrey Jiricko, Tanvi Mahajani, Kylie Peterson, Rachel Fletcher,
Victoria Homes, Justin Poll, Gene Smith

Validation of the iPAT, a New Pediatric Pain Assessment Tool
Kaylee Fauvell, Jody Osteyee

The Impact of Guided Imagery on Pediatric Post-Operative Pain Management
Kaylee Fauvell, Jacquel Lillywhite, Desiree Jensen

Emergency Department Social Work Care Managers on Social Determinants of Health
Amber Kayembe, Melissa Deshazer, Catherine Abel, Megan Chepkwurui

Impact of Vital Signs Frequency Reduction in Medical-Surgical Patients
Adrian Kjar

Transforming Pediatric Care through Culture
Holly Howe, Rebekah Ford, Arielle Melen

Utilization of Community Health Workers in Rural Healthcare
Amanda S. Keddington, Janine S. Roberts, Perry M. Gee

Using a Professional Practice Model as a Framework for Nursing Excellence Recognition
Elizabeth Corless

Improving Breastfeeding Rates Through the Implementation of Nursing Algorithms
Alisha Bowling, Marylee Tanner, Christina Knighton, Charity Huff, Rachelle Little,
Niki Slatter, Diana Jensen, Carolyn Ridge, Jordan Bunkall

LOMA LINDA UNIVERSITY SCHOOL OF NURSING

Enhancing Resiliency Among New Nurses: An Evidence-Based Project
Dania Itani Mousa, Rosalyn Phan, Robin Pueschel

Impact of Survivorship Activities on Perceived Self-Efficacy in Breast Cancer
Amanda Edwards, Pamela Esquivel, Robin Pueschel

Exploring Electronic Documentation Systems and Nurse Well-Being
Robert Harrity, Ellen D'Errico, Lisa Roberts, Jan Nick, Susan McBride, Kenrick Cato

Error Reduction in Vaccine Administration in Outpatient Clinics
Allison Wonoprabowo, Ellen D'Errico

Medical Gaslighting: A Concept Analysis
Ellen D'Errico

Nurses' Moral Distress and Organ Procurement Conflict
Daniel Hubbell, Ellen D'Errico

Influencing LGBTQ+ Health Education for Nurse Practitioner Students
Nicholas Topoleski, Corrie Berk

Resilience Training for Nurse Managers
Norie Bencito, Joseph Hacinas, Salem Dehom

Psychiatric Disorders in Inflammatory Bowel Disease: A Systematic Review
Jacqueline Sagala, Cherie Pefanco

MAYO CLINIC

Purposeful "Wounding" to Reduce Pressure Injuries
Christiane Dai Pra, Rachael Brainard, Dominique Peworski,
Jane Sederstrom, Brigid Kiley, Shae Saint-Amour

Creating Sustainable Workforce Through Recruitment in Hematology & Medical Oncology
Kristin Altman, Cassandra McDermott, Carla Johnson, Megan Hall, Whitney Archer

Organizing Family-Centered Care in the ICU During the COVID-19 Pandemic
Shae Saint-Amour, Matthew DeMarco, Brigid Kiley, Jane Sederstrom, Ayan Sen

CardioMEMS Patient Self-Management
Mary McClain, Robert Platou, Brian Hardaway

Creating a High Acuity Practice Transition Program
Dana Pionk, Matthew DeMarco, Jocelyn Pearson,
Rhyan Weaver, Glynnis Bohannon, Brigid Kiley

Start Local: Developing Future Nurse Leaders through Shared Governance
Jennifer Ernst, Jocelyn Pearson

Simulation Success in High Dose Radiation Brachytherapy Procedures
Jennifer Sanabia, Jennifer Jensen, Kelly Waldo, Carla Johnson, Whitney Archer

Knot-hing to It – Figure of Eight Suture Removal
Barbara Novais, Michael LeGal, Julie Rose, Megan Davis

Sustained Success Rates for RN Performed Lumbar Punctures: A 5-Year Review
Bryce Falk, Brent Fogelson, Larissa Lee, Janneth Lira Lopez

MONTANA STATE UNIVERSITY
MARK AND ROBYN JONES COLLEGE OF NURSING

Culturally Responsive Care in Nursing: The Tanzania Experience
Susanna Braun, Anja Christensen, Natalie Dulac, Michaela Pocius, Sophia Visger, Sadie Wilson, Cecelia Kiesow, Rebecca Rassi, Laura Larson

Ketamine vs. Traditional Pharmaceutical Management of Major Depressive Disorder
Jacob Lobb, Genesis Chavez-Reyes, Daniel Comeau, Graham Norris, Hunter Ziegler

NCLEX Experiences: A Quantitative View Moving into NextGen
Jordan Teller, Mary Pankratz

Sexual Assault Nurse Examiner (SANE) Numbers in Montana by County
Sarah Wangerin

Medication Administration Simulation and “Muscle Memory” in Nursing Students
Teresa Wicks

Improving Communication with SBAR at a Skilled Nursing Facility
Mackenzie S. Westphal, Margaret Hammersla

Learning a New Language to Build a Functional Healthcare System
Riesa Overstreet, Amanda Stone, Elizabeth Johnson

Rural Family Nurse Practitioners Perceptions of Physician Working Relationships
Alexis Printz, Stacy M. Stellflug

NORTHERN ARIZONA UNIVERSITY SCHOOL OF NURSING

Identifying Anxiety, Depression and Suicidality in Children and Adolescents
M. Veronica Borbon, Beth Gleason McManis

Will the Use of Medical Cannabis Affect Completion of Probation/Parole Requirements?
Vitina M. Cosse, Laura Marie Karnitschnig

OREGON HEALTH & SCIENCE UNIVERSITY SCHOOL OF NURSING

An Evolutionary Concept Analysis of Prison Abolition
Kendra Birnley

Nurse Handoff Standardization in a Pediatric Intensive Care Unit
Garrett Chatelain, Sharon Norman

The Role of Early Life Trauma on the Experience of Caregiving for a Spouse with Dementia
Kylee Deterding

Demoralization in Cancer Survivors: A Literature Review
Amy Leatherwood, Lissi Hansen

Is Nurse Professional Identity the Key to Decreasing Intent to Leave?
Jesse Mensik Kennedy

PROVIDENCE HEALTH & SERVICES

Orientation Materials: Impact of Transitioning from Paper to Electronic Format
Teresa Rangel, Abby Lust

Driving Toward a Culture of Zero CAUTI's
Summer Carlton, Louise Dyjur, Melissa Bowe, Elizabeth Bowen

Deriving a Model for Predicting Hospital Falls
Aubreylynne Porras, Angela Leano, Jose Ramirez

HAPI-Related to BIPAP in DSU
Carmyle Seville, Angelica Taneca

Implementing TeamBirth to Improve Patient Satisfaction on an LDRP Unit
Teresa Rangel, Deanna Higgins, Alyson Willard

A HAPI reduction QI Project: Don't Leave Your Patients in S.H.A.M.B.L.E.S
Anissa Guzman, Ashlee Garcia, Valerie Lindsay

FAST-5: A Frontline Nurse-Designed Tool to Predict Inpatient Fall Risk
Dawn Gadwa, Shih Ting Chiu, Crystal Billings

Throughput Without Barriers
Laura A. Longacre

Development of a Trauma-Informed Care Safety Tool on a Mental Health Unit
Teresa Rangel, Katie Rhea

ED Throughput: Reducing the LOS for Patients Discharged from the ED
Marc Wirtz

ROSEMAN UNIVERSITY OF HEALTH SCIENCES COLLEGE OF NURSING

Growing Leaders & Formation of Minority Student Nurses Association
Marife Aczon-Armstrong, Kaizz Quito, Jaimee Garcia

Vulnerability During a Pandemic
Marife Aczon-Armstrong, Jene Hurlbut, Rowena Bermundo, Juliana Morone

Impact of COVID19 on Vulnerable Population: Role of Social Support
Marife Aczon-Armstrong, Rowena Bermundo

Nurse Educator Transition into Academia: Lived Experience
Marika Chunyk, Marife Aczon-Armstrong

What It Means to Be a Fulbright Scholar: A Life-Changing Experience
Marife Aczon-Armstrong, Manas Mandal

Telehealth in the Emergency Department: Impact on Wait Times
Marife Aczon-Armstrong, Carmela Bautista, Mackenzie Hazen, Gabriella Kellye, Vicente Lujan, Rebecca Pullen, Alexander Romero, Rowena Bermundo

SAINT MARTIN’S UNIVERSITY

Nursing Interventions to Reduce Cesarean Section Related with Fetal Malposition
Sufina Ahmath

Preventing Caregiver Emotional Distress in the Post-Stroke Discharge Period
Erica Moody

Reproductive Grief Care in the Perioperative Setting
Murinda McCuller

The Role of the School Nurse in Preventing Suicide in Adolescents
Jadean Leon-Guerrero

Pain Reduction Techniques for Pediatric Intramuscular Injections
Kamaldeep Kidder

SAMUEL MERRITT UNIVERSITY COLLEGE OF NURSING

Re-Engineering Higher Education: Fostering a Healthy Work Environment for Nurses Using a Shared Governance Model
Lorna Kendrick

Using the Burnout Dyad Model to Explore Adverse Childhood Experiences (ACES) and Toxic Stress
Adrienne Martinez-Hollingsworth, Linda Kim, Lorna Kendrick,
Norma Perez, Marco Angulo, Roger Liu

Child Prisoners of War & the Eco-Social Trauma Intervention Model
Daniel Doolan, Adrienne Martinez-Hollingsworth

Primary Care Provided by Nurse Practitioners for People Experiencing Homelessness:
An Impact Analysis
Sharon Vogan

Improving Patient Nurse Communication by Fostering Ethnocultural Empathy
Cynthia Stacy

Nursing Students' Perceptions of Pediatric Clinical Experience
DeAnne Larsen, Michele Faxel, Staci Shanks, Michele Santilhano

Student Nurses Support Marginally Housed Health Needs: Case Studies from "Connect to Meds"
Elizabeth Sibson-Tuan, Sarah Foster

An Academic & Service Sector Project to Reduce Readmissions
Janet Rowland, Paulina Hidalgo, Manuel Arteaga, Winnie Huang, Kathryn Shade

Three Sisters to Transformative Learning
Mark Beck, Richard MacIntyre

Symptom Occurrence Rate & Severity Comparison Among Diverse Women
After Chemotherapy
Carmen Ward-Sullivan

Using Student Feedback to Drive Teaching Modality
Fusae Abbott, Janet Rowland, Lisamarie La Vallee, Linda Kendig

Nursing Students Engage an Adult Population to Stretch and Dance
Barbara Parker

SEATTLE UNIVERSITY COLLEGE OF NURSING

Effectiveness of Increasing Self-Compassion in Nursing Students Through an In-Person Session
Including Word Cloud
Ryan Kapoi, Emily Beyer, Steven Palazzo

Upper Arm Weakness: A Risk for Non-cardiovascular Mortality Among Octogenarians
Mo-Kyung Sin, Ali Ahmed

STANFORD MEDICINE CHILDREN'S HEALTH

Initiation of Palliative Care Services Early in Stem Cell Transplant Course
Molly Williams, Laurel Kent, Lisa Pinner, Elizabeth Callard, Joan Fisher, Kim Pyke-Grimm

UNIVERSITY OF ALASKA ANCHORAGE SCHOOL OF NURSING

Interdisciplinary Collaborations in a Capstone Course
Jennifer McKay, Sharyl Eve Toscano

Mandalas, *GROK* Games, & Museum Visits: The Foundations of a Capstone Course
Sharyl Eve Toscano

UNIVERSITY OF ARIZONA COLLEGE OF NURSING

Cultivating Post-Traumatic Growth and Community Reintegration in Rural Veterans
Christine Ann Beguin-Fernald, Lindsay Ann Bouchard,
Shawn Patrick Gallagher, Robin J. Poedel

A New Theoretical Framework for Symptom Experience of Heart Failure Patients with Dysphagia
Juvel-lou P. Velasco, Shu-Fen Wung

Technology-Enhanced Wisdom: An Emerging Mid-Range Nursing Theory
Pankaj Vyas, Sheila M. Gephart

BETTY IRENE MOORE SCHOOL OF NURSING AT UC DAVIS

Summer Health Institute for Nursing Exploration and Success: Pathway to a Bright Future
Patricia Fernandez, Kupiri Ackerman-Barger

Barbershop Health Talks: Nurses Building Interprofessional Patient Education (In Style)
Aron King, Carter Todd

Breaking Barriers: A Collective Impact Approach to Diversity in Nursing
Aron King, Jason Ramos, Patricia Fernandez

Incorporating Parents' Values and Beliefs: Early Intervention Services
Yuuko Johnson, Jann Murray-Garcia, Jill G. Joseph, Elena O. Siegel

UC IRVINE SUE & BILL GROSS SCHOOL OF NURSING

A Duty to Care: Male Perspectives on Caregiving for Persons with Dementia
Michael Bueno

Who Advocates for the Advocate? The Impact of COVID-19 Among School Nurses
Nakia C. Best, Jessica Hernandez, Lacye Lawson, Phyllis F. Agran

Machine Learning Modeling to Predict Perceived Health Status Among Asian Americans
Jung In Park, Grace Eunyoung Lee, Sunmin Lee

Chronic Stress, Depression and PTSD Among Immigrant Nigerian Women
Sophia Ukonu, Adey Nyamathi

UCLA SCHOOL OF NURSING

HPV Vaccination for 9–15-Year-Olds Associated with Disability, Chronic Conditions
Yuriko Matsuo, Mary-Lynn Brecht, Umme Warda, Lauren Clark, Dorothy Wiley

Developing Guidelines for the Management of Zoom Interviews for Qualitative Inquiry
Amanda Berumen, Yuriko Matsuo, Dorothy Wiley, Janice Morse, Lauren Clark

A Systematic Review of the Biological Mediators of Fat Taste and Smell
Rosario B. Jaime-Lara, Brianna E. Brooks, Carlotta Vizioli, Mari Chiles, Nafisa Nawal, Rodrigo S. E. Ortiz-Figueroa, Alicia A. Livinski, Khushbu Agarwal, Claudia Colina-Prisco, Natalia Iannarino, Aliya Hilmi, Hugo A. Tejeda, Paule V. Joseph

Supporting Lactation for Women with a History of Substance Use
R. Kate Mitchell

Student Veterans: The Lived Experience of Veterans in Higher Education
Ali R. Tayyeb

A Quality Improvement Pilot Project:
Does Preoperative Ostomy Care Impact Patient Outcomes?
Maki Jerden, Wendie Robbins, Nancy Jo Bush, Sophie Sokolow, Elizabeth Thomas

A Delphi Analysis of Staffing Policy: Unit-Level Nurse-to-Patient Ratios
Sarah Delgado, Nancy Blake, Lauren Clark, Theresa Brown, Jack Needleman

The Impact of Compression Stockings on Patients' Quality of Life
Bernice Tan, Wendie Robbins, Theresa Brown, Emma Cuenca, Sophie Sokolow

Association of Wellness, Adverse Events, and Suicide Ideation Among American Indians
Felicia Schanche Hodge, Wendie Robbins,
Rey Paolo Ernesto Roca III, Christine Samuel-Nakamura

Access to Healthcare in Myanmar Refugees in Thailand During COVID Pandemic
Sarah Oung, David Tanoko, BoRam Kim, Cheng-Shi Shiu, Wei-Ti Chen

Mental Health in Burmese Refugees During the Current Myanmar Civil War
David Tanoko, Sarah Oung, BoRam Kim, Cheng-Shi Shiu, Wei-Ti Chen

UCSF SCHOOL OF NURSING

Examining the Relationship Between Sexual Orientation and Sexual and Reproductive Health Literacy of African American Women: A Pilot Study
Daphne Scott-Henderson, Linda Franck, Tom Hoffmann

A Delphi Study on High-Frequency Percussive Ventilator Transport Management Pathways
Lindsey Scheller, Sandra Staveski, Alison Horton, Peter Oishi

The Lived Experience of Geriatric Surgical Patients Who Describe Challenging Postoperative Symptoms at Home Following Major Surgery: A Qualitative Thematic Analysis
Christina Keny, Victoria Tang, Veronica Yank, Alexis Colley

Reporting Attitudes of Musculoskeletal Disorders in Nursing Assistants in South Korea
Minjung Kyung, OiSaeng Hong, Soo-Jeong Lee, Laura Wagner

Insomnia and Discrimination: Associations with Telomere Length in Older Adults
Greg Roussett, Aric Prather, Margaret Wallhagen, Sandra Weiss

UNIVERSITY OF COLORADO COLLEGE OF NURSING

Preventing Aspiration Among Long-Term Care Residents at Risk of Dysphagia
Felice Chang, Kathy Shaw

Obstetric Violence: Making Meaning from the *Break the Silence* Social Media Campaign
Lorraine Garcia, Jacqueline Jones, Jean Scandlyn

The Narrative Intervention for People Living with COVID-19 (NICO) Sub-Study
Stephanie Kessinger, Desiree Reinken, Amy Crisp, Emma Baker, Rachel Johnson-Koenke

Utilizing Theory to Screen Parents of Burned Children for Unexpected Sequelae
John Recicar, Michael Rice

Increasing Bed Availability in a Tertiary Care Center: A QI Project
Travis Scott

Health-Related Experiences of Transgender and Gender-Diverse Coloradans
Roque Anthony Velasco, Christina J. Sun

Stories of Tension: COVID-19 Backdrop to Cancer Caregiver Narratives
Charlotte Weiss, Rachel Johnson-Koenke

UNIVERSITY OF HAWAII AT MANOA
NANCY ATMOSPERA-WALCH SCHOOL OF NURSING

Implementation of Postpartum Glucose Screening for Women with Gestational Diabetes
Kira Fox, Alexandra Michel, Bruce Chen, Holly Fontenot

UNLV SCHOOL OF NURSING

Students' Lived Experience with Prebriefing Structure and Elements in Simulation Training
Meghan Liebzeit, Catherine Dingley, Andrew Thomas Reyes, Jinyoung Kim

Patient Engagement and Treatment Adherence in Hemodialysis Patients
Shannon Johnson, Jinyoung Kim, Catherine Dingley, Ronald Brown, Rebecca Benfield

Remote Teaching and Nursing Transition During COVID-19: A Phenomenological Analysis
Carrie Jeffrey, Angela Silvestri-Elmore, Catherine Dingley,
Andrew Thomas Reyes, Karen Holt, Howard Gordon

Nursing Education Consultant's Decision-Making Patterns: A Scoping Review Protocol
Alexandra Duke, Catherine Dingley

The First National Survey of Nursing Education Consultants
Alexandra Duke, Catherine Dingley

Babywearing's Influence on Parent and Infant Heart Rates
Joo-Hee Han, Hyunhwa Lee, Du Feng, Rebecca Benfield, Peter Gray, Lela Rankin

New Nurses Readiness: A Scoping Review of Different Programs
Karen Gonzales, Nirmala Lekhak

Completion of Childhood Vaccines and Strategy Mixes: A Vaccine Strategic Plan
Chris Elaine L. Mariano, Jennifer Vanderlaan, Brian Labus

A Focused Ethnographic Study on Inclusion of SDoH into the Nursing Education Curriculum
Lourdes Jamison, Andrew Thomas Reyes

Care Coordination in Reducing Depression Symptoms in Emergency Room Visits
Stacy Sumpter, Reimund Serafica

Technological Complexity and Learning Outcomes in Prelicensure Nursing Students
Deborah Rojas, Reimund Serafica

Acculturation Predicted Health Promoting Lifestyle among Nigerian Immigrants
Frank Akpati, Jennifer Kawi

UNIVERSITY OF NEW MEXICO COLLEGE OF NURSING

Concept Analysis of Self-Esteem Among Sexual and Gender Diverse Adolescents
Michael Baker, Elizabeth Dickson

Hypertension Health Literacy Among Hispanics: A Concept Analysis
Sandra Cardenas, Jongwon Lee

Nursing Equity: An Evolutionary Concept Analysis
Kimberly Spray, Stephen Hernandez

UNIVERSITY OF NORTHERN COLORADO SCHOOL OF NURSING

Academic Entitlement and Learning: An Integrated Review
Rebbecca Nemec

Using a Flipped Classroom to Improve Clinical Judgment: A Randomized Control Study
Alisha Loken

UNIVERSITY OF PORTLAND
SCHOOL OF NURSING AND HEALTH INNOVATIONS

Implementation of Concept Packages to Enhance Undergraduate Nursing Education
Chloé Littzen-Brown, Nicole Auxier, Laura Blackhurst

UNIVERSITY OF SAN DIEGO
HAHN SCHOOL OF NURSING AND HEALTH SCIENCE

Health Literacy and HbA1c Level Relationships in a Rural Border Region
Stephen Jaime

Parental Perceptions of Childhood Vaccines
Jenna Scarafone

Psychiatric Diagnoses in ED Admitted Psychiatric Naïve Patients with COVID-19
Doris Asombrado

COVID-19 Pandemic and Intimate Partner Violence: Latinas Lived Experience
Lorena Perez

Managing Menopausal Symptoms Through Exercise and Dietary Change
Razel B. Milo, Ae Rah Kang

Virtual Care Team Program to Improve Hypertensive Patients' Compliance
Razel B. Milo, Marcie Santillan

Atrial Fibrillation Management in Hispanic Adults: A Retrospective Study
Tania Borja-Rodriguez

BMI of Overweight Patients: Diet, Physical Education, and Obesity Awareness
Razel B. Milo, Sheena Amos

Professional Values and Moral Distress in Nursing Education during COVID-19
Elvira Dominguez-Gomez, Razel B. Milo

Social Identity of the Oncology Patient
Patty Magdaluyo

Using a Conceptual Framework to Guide Qualitative Research
Christine Nibblelink

Screening on Admission for Palliative Care Referral: A Novel Approach
Carline Etland

UNIVERSITY OF UTAH COLLEGE OF NURSING

Natural Experiment Approaches to Explore Family Well-Being: A Scoping Review
Elizabeth Sloss, Megan C. Thomas Hebdon, Lydia A. Howes,
Echo Warner, Katherine A. Sward, Djin L. Tay

Multiple Trauma Activation Training for Surgical Services
Rachael Hubertz, Jia-Wen Guo

Needs Assessment for Ordering Tests and Treatments in ED Triage
Alex C. Truong, Jia-Wen Guo

Usability Evaluation of a Revised Symptom Assessment APP for Children
Sydney Gilliland, Lauri Linder

Improving Constipation Management in Pediatric Primary Care
Nicole Craven, Jennifer L. Hamilton

Assessing Severity of Patient-Reported Diarrhea during Cancer Therapy
Natalya Alekhina, Kathi Mooney, Bob Wong

Overcoming Common Barriers to Ace Screening in Primary Care
Chiara Wallace, Katherine Doyon

Identification and Treatment of Obstetric Complaints in a Rural ED
Charity McDaniel, Lisa Taylor-Swanson

Improving Darkly Pigmented Skin Assessments & Incontinence-Associated Dermatitis
Tracey Ly, Katherine Doyon

UNIVERSITY OF WASHINGTON SCHOOL OF NURSING

Social Support During Breast Cancer Treatment and Exercise Capacity
Johnny Nguyen, Kerryn Reding

Behavioral Management Mediators and Moderators on Caregiver Mood in RDAD-NW
Jingyi Li

The Barnard Center for Infant Mental Health: Promoting First Relationships
Jonika Hash, Susan Spieker, Maria Bleil, Monica Oxford

de Tornyay Center for Healthy Aging: Celebrating 25 Years of Impact
Priscilla Carmiol-Rodriguez, Paige Bartlett, Heather Wicklein Sanchez, Sarah McKiddy, Basia Belza

Implementation of Sustainable Cervical Cancer Preventive Services in Kenya
Harriet Fridah Adhiambo, Kenneth Ngure, Nelly Mugo, Colin Baynes, Michelle Shin, Sarah Gimbel

Qualitative Best Practice with Linguistically Diverse Participants
Emily Ahrens, Rashmi Sharma

Use of Sensors for Physical Activity Measurement in the Prosper-HIV Study
Vitor Oliveira, Allison Webel, Dustin Long, Dave Cleveland, Christine Horvat Davey, Amanda Willig, Tom Buford

Is Environmental Enrichment Neuroprotective Against Brain Radiation?
Karl Cristie Figuracion, Hilaire Thompson, Christine MacDonald

In-Person vs. Zoom Delivered Parenting Program to Korean Americans
Eunjung Kim, Sou Hyun Jang, Younghee Cho, Rachel Lee

Mapping Antiracism Efforts in Nursing
Kahlea Williams

Restructure Framework to Maximize Nursing's Impact
Allison Webel, Basia Belza, Butch de Castro, Sarah Gimbel, Pamela Kohler, Monica Oxford, Teresa Ward, Sarah Zangrillo, Brenda Zierler, Azita Emami

Promoting Interdisciplinary Networks in Music-Based Interventions
Sarah McKiddy, Aaron Colverson, Jennie Dorris, Basia Belza

UNIVERSITY OF WYOMING FAY W. WHITNEY SCHOOL OF NURSING

Behavioral Health Integration: Increasing Access to Care in Rural Communities
Nancy McGee, J'Laine Proctor, Josh Moro

WEBER STATE UNIVERSITY ANNIE TAYLOR DEE SCHOOL OF NURSING

Expanding Patient Cancer Care through a Cancer Nurse Navigator
Kasey Grubb, Kelley Trump

Simulation Implementation into FNP Students' Clinical Learning Experiences
Anne Kendrick, Kristy Baron

Implementation of a Pediatric Celiac Disease Care Process Model
Chelsea Pike, Kristy Baron

Implementation of a Trauma-Informed Yoga Program
Trish Gibbs, Diane Leggett-Fife

Mentoring New Members in Professional Organizations
JoAnn Tolman, Diane Leggett-Fife

Promoting Inclusive Nursing Care for LGBTQ+ Patients
Nancy Weston, Kristy Baron

WIN HONORS

The Western Institute of Nursing recognizes members and colleagues with the following awards and honors in 2023.

DISTINGUISHED RESEARCH LECTURESHIP

The Distinguished Research Lectureship recognizes a senior researcher whose research efforts have made significant and sustained contributions to nursing.

Mary A. Nies, PhD, RN, FAAN, FAAHB, Professor and Special Assistant to the Dean, Idaho State University College of Health

WIN EMERITI

The honorary designation of WIN Emeriti was established in 1984 by the Western Council on Higher Education for Nursing (WCHEN). WIN has continued this honorary designation to recognize retired nurses or other individuals who have demonstrated distinguished service to WIN or to its predecessor, WCHEN.

Nancy Woods, PhD, RN, FAAN, Professor Emerita, University of Washington School of Nursing

ANNA M. SHANNON MENTORSHIP AWARD

The Anna M. Shannon Mentorship Award was established in the name of the former Dean and Professor of the College of Nursing, Montana State University – Bozeman who unselfishly supported and promoted the professional growth of other nurses in the West.

Frances Lewis, PhD, RN, MN, FAAN, Endowed Professor, University of Washington School of Nursing

CAROL A. LINDEMAN AWARD FOR A NEW RESEARCHER

The New Researcher Award was established in 1976 by Carol A. Lindeman to support nursing researchers early in their careers. In 1987, the award was renamed to recognize Dr. Lindeman for her contributions and support of colleagues.

Omeid Heidari, PhD, MPH, ANP-C, Assistant Professor, University of Washington School of Nursing

JO ELEANOR ELLIOTT LEADERSHIP AWARD

Established in 1988, the Jo Eleanor Elliott Leadership Award recognizes an individual who has advanced the mission and goals of WIN through sustained, exemplary leadership and service.

Nancy Woods, PhD, RN, FAAN, Professor Emerita, University of Washington School of Nursing

MARTHA (MARTY) J. LENTZ WIN / CANS DISSERTATION GRANT

The purpose of the Martha (Marty) J. Lentz WIN/CANS dissertation grant is to foster doctoral student dissertation research. The grant was named after Dr. Marty Lentz in 2020 in recognition of her many contributions to nursing research and to WIN.

Linda Yoo, RN, PhD Candidate, University of Washington School of Nursing

SIGMA / WIN RESEARCH GRANT

Sigma and WIN jointly sponsor a research grant to encourage qualified nurses to contribute to the advancement of nursing through research.

Komal P. Singh, PhD, RN, Nurse Scientist, Mayo Clinic

WIN / NLN RESEARCH GRANT

WIN and the National League for Nurses jointly sponsor a grant to promote research conducted by academic educators, clinical nurse educators, or doctoral nursing students.

Toyin Olukotun, PhD, RN, Assistant Professor, University of Portland School of Nursing & Health Innovations

REGIONAL GERIATRIC NURSING RESEARCH AWARD: SENIOR RESEARCHER

WIN recognizes evidence of excellence and/or innovation in gerontological nursing research.

Ruth Taylor-Piliae, PhD, RN, FAHA, FAAN, Professor, University of Arizona College of Nursing

REGIONAL GERIATRIC NURSING EDUCATION AWARD

WIN recognizes evidence of excellence and/or innovation in gerontological nursing education.

Kristen Childress, DNP, ARNP, FNP-BC, AGNP-C, CWCN-AP, Associate Teaching Professor, University of Washington School of Nursing

CONFERENCE SCHOLARSHIP AWARD

WIN is committed to structuring opportunities to advance health equity in the West and specifically to promoting health equity through WIN programming and to developing nurse leaders from diverse populations.

Nicole E. Lewis, RN, MBA-HA, PhD Student, UCLA School of Nursing

Tao Zheng, MN, RN, CCRN-CSC-CMC, CHFN, PCCN, PhD Candidate, University of Washington School of Nursing

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In 1989, WIN established the Western Academy of Nurses (WAN) to recognize and honor nurses who have been actively engaged in WIN and have demonstrated excellence in nursing research, practice, and/or education.

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