COMMUNICATING NURSING RESEARCH

Volume 55

JUSTICE, EQUITY, DIVERSITY, AND INCLUSION (JEDI): CREATING A NURSING FORCE FOR CHANGE

An annual publication of the Western Institute of Nursing.

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PORTLAND, OR 97239-2941

Spring 2022

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
Issues previously published:

Volume 1: The Research Critique
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
Volume 7: Critical Issues in Access to Data
Volume 8: Nursing Research Priorities: Choice or Chance
Volume 9: Nursing Research in the Bicentennial Year
Volume 10: Optimizing Environments for Health: Nursing's Unique Perspective
Volume 11: New Approaches to Communicating Nursing Research
Volume 12: Credibility in Nursing Science
Volume 13: Directions for the 1980's
Volume 14: Health Policy and Research
Volume 15: Nursing Science in Perspective
Volume 16: The Image of Nursing Research: Issues and Strategies
Volume 17: Advancing Nursing Science: Qualitative and Quantitative Approaches
Volume 18: Influencing the Future of Nursing Research through Power and Politics
Volume 19: The Winds of Change: New Frontiers in Nursing Research
Volume 20: Collaboration in Nursing Research: Advancing the Science of Human Care
Volume 21: Nursing: A Socially Responsible Profession
Volume 22: Choices within Challenges
Volume 23: Nursing Research: Transcending the 20th Century
Volume 24: Partnerships: Putting It All Together
Volume 25: Silver Threads: 25 Years of Nursing Excellence
Volume 26: Scholarship in Practice
Volume 27: Research, Practice, and Education within the Health Care Agenda
Volume 28: Innovation and Collaboration: Responses to Health Care Needs
Volume 29: Advancing Nursing through Research, Practice, and Education
Volume 30: Nursing: Changing the Environment
Volume 31: Quality Research for Quality Practice
Volume 32: Nursing Research: For the Health of Our Nation
Volume 33: Building on a Legacy of Excellence in Nursing Research
Volume 34: Health Care Challenges Beyond 2001: Mapping the Journey for Research and Practice
Volume 35: Health Disparities: Meeting the Challenge
Volume 36: Responding to Societal Imperatives through Discovery and Innovation
Volume 37: Hallmarks of Quality: Generating and Using Knowledge
Volume 38: Looking Ahead: Innovations in Nursing Science, Practice, and Education
Volume 39: Building Knowledge for Practice
Volume 40: 50 Years of Advancing Nursing in the West 1957 – 2007
Volume 41: The Circle of Nursing Knowledge: Education, Practice and Research
Volume 42: Networks in Nursing Science: Creating our Future
Volume 43: Nursing Science: Informing Practice and Driving Policy
Volume 44: Transitions: Unifying Practice, Education, and Research to Improve Health
Volume 45: Advancing Scientific Innovations in Nursing

Volume 46: Creating a Shared Future of Nursing: Research, Practice, and Education
Volume 47: Taking It Global: Research, Practice, and Education in Nursing
Volume 48: Equity and Access: Nursing Research, Practice, and Education
Volume 49: Innovations in Engagement through Research, Practice, and Education
Volume 50: 50 Years of Leadership: Continuing the Vision
Volume 51: Transforming Health through Advances in Nursing Research, Practice, and Education
Volume 52: Career, Connection, Community
Volume 53: 20/20 and Beyond: Envisioning the Future of Nursing Research, Practice, and Education
Volume 54: Better Together: Integration of Nursing Research, Practice, and Education

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 55th Annual Communicating Nursing Research Conference, “Justice, Equity, Diversity, and Inclusion (JEDI): Creating a Nursing Force for Change,” was held in Portland, Oregon from April 6-9, 2022.

The keynote address was delivered by **Ernest Grant**, PhD, RN, FAAN, President, American Nurses Association, Silver Springs, MD. State of the Science presentations were delivered by: **Kupiri Ackerman-Barger**, PhD, RN, CNE, FAAN, Associate Dean for Health Equity, Diversity, and Inclusion, Associate Professor, Betty Irene Moore School of Nursing at UC Davis, Sacramento, CA; **Dena Hassouneh**, PhD, RN, ANP, PMHNP, FAAN, Professor, School of Nursing, Oregon Health & Science University, Portland, OR; and **Monica R. McLemore**, RN, MPH, PHD, FAAN, Associate Professor, Family Health Care Nursing, School of Nursing, University of California, San Francisco, CA.

Two award papers were presented:

Distinguished Research Lectureship Award: **Kathryn A. Lee**, PhD, RN, Professor Emerita, School of Nursing, University of California, San Francisco, CA

Carol A. Lindeman Award for a New Researcher: **Paula M. Kett**, PhD, MPH, RN, Research Scientist, Center for Health Workforce Studies, Department of Family Medicine, University of Washington, Seattle, WA

The Proceedings include the abstracts of symposium, podium, and poster presentations. One hundred and twenty papers were presented in podium sessions on a wide variety of topics. Forty-nine papers were presented in ten symposia, and seventy-one papers were organized in fourteen other podium sessions. Three hundred and fifty-four posters were presented, representing projects and research, completed or in-progress. A total of one hundred and seventy-seven 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 the Program Committee members: Judy Liesveld, Chair, NM; Linda S. Edelman, UT; Leah Fitzgerald, CA; Cara Gallegos, ID; Martha L. Grubaugh, CO; Seiko Izumi, OR; Ahlam Jadalla, CA; Hannah Jang Kim, CA; Mary Koithan, WA; Jung-Ah Lee, CA; Kathryn Lee, CA; Paula Meek, UT; Austin Nation, CA; Ann Nielsen, OR; Anjanette Raber, OR; and Krista Scorsone, CO.

We extend our gratitude to all those who submitted papers and participated in the 2022 conference.

Jane H. Lassetter, PhD, RN, FAAN
President, Western Institute of Nursing

Judy Liesveld, PhD, RN, PPCNP-BC, CNE
Chair, Program Committee, Western Institute of Nursing

SYMPTOM SCIENCE … LIFE'S LESSONS FOR CLINICAL RESEARCH

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Funding sources: Research supported in part by the James and Marjorie Livingston endowed chair position in the UCSF School of Nursing (1993-2015), and NIH grants (1982-2018): F31NU05683, R29NR02247, T32NR07088, R01NR02247, R01NR03969, R01NR04259 and supplement from the Office of Women's Health, R01NR05345 and Diversity Supplement, R01NR015215, R01MH074358, R43HD051243, R43HL090110, R43NR010688, and R21NR015215.

Introduction

I wish to thank the selection committee for this honor. I appreciate the opportunity to reflect on my academic career and my love of research and teaching the next generation of nurses, nurse educators, and researchers. While I was growing up, there was little opportunity for women to think about professional careers other than secretary, teacher or nurse. Being first-generation to go to college, thinking about career options was a stretch in my family. I selected nursing on my college application because a friend's mother worked with nice nurses and she was helping me complete the application for San Jose State University. As I progressed through college courses, I realized that the nursing curriculum created a wonderful launching pad into the world of health care and helping others to achieve their highest potential for wellness. Nursing was a perfect match for me and I never regretted my career decisions along the way, but these decisions were primarily prompted by serendipity. As a labor and delivery nurse in Seattle, Marcia Killien had students on my unit and she encouraged my application to the masters program at University of Washington (UW). She wrote a recommendation and helped me with that application, which gave me the opportunity to re-think my career goals. Because I was clinically fascinated by pre-eclampsia and eclampsia seizures, I applied to the clinical nurse specialist program focused on neurology with Pam Mitchell and did a teaching minor. It was my practice teaching course with mentors like Marty Lentz and Ann Loustau who lured me into teaching. I loved teaching Nursing Process to students who asked great questions, and my thesis research project had me hooked on an academic career in research to answer some of those student questions. During my PhD program at UW and my postdoctoral training in the Robert Wood Johnson (RWJ) Clinical Nurse Scholar's program at University of California, San Francisco (UCSF), I was challenged every step of the way, but motivated even when repeatedly explaining to my family why I was STILL in school.

Over the past 30 years, I had the privilege of an academic career that allowed for flexibility in teaching and research. As I designed longitudinal studies with clinical populations that interested me I realized that I was creating clinical "caseloads" to follow over time. Reflecting over my research career, and deciding what I could talk about today, with only one hour to get it all in, I distilled my experience into four simple criteria for success. I am not sure if this is a positive or negative reflection on my life, but the four criteria are represented by the letters ***O O P S***. In this talk, I hope to help you create some **OOPS** for yourself as you launch your own clinical research career or participate as a collaborator in other research projects.

O is for opportunity
O is for obsessive tendencies
P is for passion
S is for serendipity

These **OOPS** are not to be confused with my accidental "ooops" and I will also share some of those experiences as twelve "lessons learned" while I take you on this career tour. I have done research with women across the lifespan, women living with chronic illness like HIV/AIDS, and even some populations of men like new fathers. For this talk, however, I will focus on my contributions to women's health research and symptom science with examples of symptoms like insomnia and fatigue during pregnancy and postpartum. I was a long-standing member of the UCSF Symptom Management faculty group, and I had a T32 for 20 years that focused on training doctoral students and postdoctoral scholars in symptom management. Symptom science is part of who I am (Lee, Meek, & Grady, 2014) and my research focused on sleep and fatigue across the lifespan (Lee, 1982; 2003; 2011).

Across the lifespan, women report worse sleep compared to men of the same age (Nowakowski et al., 2013). In 2005, the National Institutes of Health (NIH, 2005) acknowledged sex differences in sleep and estimated that insomnia was experienced by 15-45% of women in pre-menopause and 35-60% in post-menopause. NIH continues to address this issue for women across the lifespan, even 15 years later (Brown et al., 2020). During pregnancy, the prevalence of poor sleep quality varies depending by gestational week, but most people agree that by 40 weeks, sleep is very poor, and it does not improve after giving birth. In fact, it can get worse when there is an adolescent with a driver's license living at home, and sleep may not improve even when the teen graduates and moves away from home. By that time, women are reporting insomnia and fatigue with menopausal transition and caring for elderly relatives. Knowing that sleep and fatigue were life-long symptoms for women regardless of their health status, I had my life's work ahead of me.

The Early Years - PhD Lessons Learned

I was fortunate to begin my research with a dissertation on sleep during the menstrual cycle. Every dissertation committee will advise a student against a longitudinal study for their dissertation, and for good reasons if the student ever wants to finish and graduate. I was a Research Assistant for Dr. Nancy Woods, responsible for entering data from women's symptom diaries over a 90-day period, and that was longitudinal enough for me (Mitchell & Woods, 1996). However, I did a longitudinal study –one entire menstrual cycle – with a quasi-experimental design to describe changes in sleep stages before and after ovulation. The hypothesis was that increased body temperature with ovulation and hormonal changes would shift the circadian temperature rhythm. This shift would change sleep architecture, specifically slow-wave deep sleep and rapid-eye-movement (REM) sleep, and mood state would be affected.

University of Washington provided *opportunity* on many levels for a research career. First, I learned the value of collaboration and multi-disciplinary team research while I was a Project Director for sleep apnea research funded by NIH (P.I., Elizabeth Giblin). I was encouraged to submit a research abstract and the team prepared me for presenting at a national conference where I had the honor of being one of seven authors on a case study (Matsumoto et al., 1985; Sandblom et al., 1983). During my PhD training, I had the *opportunity* for great mentorship from Dr. Nancy Woods and from Dr. Joan Shaver who was beginning a study on sleep in menopausal women (Shaver et al., 1988). As co-sponsors for my F31, they shared my *passion* for women's health, and guided me through the NIH application process, which required a certain level of *obsessive* behavior just to put it together and send 15 photocopies by FedEx to Washington DC. On another level, I was fortunate to select young healthy menstruating women as my research population of interest, because as I got older, my research participants could age right along with me and I could think about future studies of pregnancy, menopause, and caregiving. There was some *serendipity* here as well – as I completed data collection with the last of the 20 menstruating women, two earlier participants became pregnant and I was able to continue collecting data in the sleep laboratory on these two women at each trimester. I took this opportunity not because I thought it would be great pilot data for the next study, but because I had moved back to California and it was an excuse to return to Seattle every three months to see my friends.

My findings described sleep and circadian rhythms during the menstrual cycle, but I was terribly disappointed that my hypotheses were not supported. I had spent 88 consecutive nights in the sleep laboratory collecting data, only talking to my participants and the night custodian, and feeling like the project was an utter disaster. At one point I slept through the day and into the night, and missed data collection for participant #008 who did not want to re-schedule. Two papers were published (Lee, 1988; Lee, Shaver, Giblin, & Woods, 1990) and there was contribution to knowledge, but my *passion* for sleep and menstrual cycle research was gone. As expected from dissertation training, however, I learned a great deal from the experience and the mentoring. What I really learned, however, was not publishable. First, women who said they ovulated regularly like clockwork every month actually did not ovulate once they were enrolled in my study. Second, women who said they had premenstrual syndrome (PMS) or moodiness every month did not have it that month. Finally, women who said they never experienced PMS actually did when I studied them in the laboratory. **Lesson Learned No. 1**: you cannot rely on regularly menstruating women to be regular once they enroll in a study and start paying attention to their cycles.

The Luxury of Postdoctoral Training

The dissertation experience had depleted my *passion* for menstrual cycle research, but my findings for changes in sleep across pregnancy in a sample of two women was fueling my curiosity as I applied for the RWJ Clinical Nurse Scholars postdoctoral program. RWJ had three sites for this program and when I was accepted, I grabbed that *opportunity* to return to California to be closer to family in the Central Valley. I used the first few months of my postdoctoral training at UCSF to write manuscripts and design the next study. I knew I could not survive another 88 nights in a sleep laboratory, so I decided to study women who slept during the day and worked night shift. This was only a 2-year fellowship, so again, longitudinal research was out of the question and I did need experience with large cross-sectional survey designs. My hypothesis was that night shift would alter circadian rhythms and increase the risk of irregular, anovulatory menstrual cycles and infertility. The RWJ funding created the *opportunity*, and I was *obsessive* about understanding women's health issues and sleep problems after my own experience working night shift schedules.

My *passion* for research was re-fueled, and I created a 32-page survey questionnaire. Copies with stamped return envelopes were distributed to seven different hospital sites, and in just a few weeks I began receiving completed questionnaires from over 700 women. As I distributed questionnaires to all the nursing stations at night, many nurses I met were obviously pregnant, and I knew my hypothesis about infertility and nightshift was not going to be supported. Some night nurses volunteered that they moved to less-demanding night shift because of the pregnancy. My *passion* was boosted again as I distributed those questionnaires to nurses on night shift: I was home by midnight, shift workers were thrilled that someone was actually doing research on their health issues, and I had a 90% response rate (Lee, 1992). This experience created *opportunities* for publishing a number of papers, provided a doctoral student with data for a dissertation (Rittenhouse & Lee, 1993), and allowed for colleagues with their unique perspectives to collaborate with me on specific aspects of women's health (Lee & DeJoseph, 1992; Lee & Lipscomb, 2003). Furthermore, I could ignore the hypothesis about infertility because I was given a logical explanation from the *serendipity* of talking to a few pregnant nurses who transferred to night shift.

During the second year of the RWJ fellowship, I focused on the "clinical" component of the Clinical Nurse Scholars program and took advantage of the *opportunity* to spend time at the Stanford Sleep Disorders Center, 45 minutes south of San Francisco and 45 minutes closer to family in the Central Valley. I was welcomed to that Sleep Disorders Center; it was free labor but the title of "postdoctoral fellow" gave me great credibility. I gave them some clinical insights into sleep problems (Bliwise et al., 1993; Castro et al., 2009), and they gave me new skills in assessing patients for sleep disorders as well as their full collaboration when I needed to create a fatigue measure for my next research steps (Lee, Hicks & Nino-Murcia, 1991).

With data collection completed on 700 nurses and the two pregnant women in Seattle. I traveled and interviewed for faculty appointments and clinical appointments. I was hired at UCSF as an Assistant Professor with 50% time for research. With that *opportunity* along with not having to re-orient myself to a new city and academic environment, I was able to use the extra time to think, to be *obsessive* about next steps and writing a grant proposal, and to attend professional conferences. It was at a sleep conference in the exhibit hall where I saw great *opportunity*. I always visited vendor booths at these conferences –not only for the free mints or pens, but for demonstrations of the latest technological advances. **Lesson Learned No. 2**: Once a relationship is initiated with a vendor, you can arrange to borrow the device or offer free beta testing. For beta testing I decided that if a device was being used with astronauts it must be okay for pregnant women, and I was hooked on using battery-operated ambulatory monitoring equipment for data collection in the home.

Now able to finally design a study for the home environment, I would not need an expensive sleep laboratory and not need to live like a night shift worker. Like Dorothy in the Wizard of Oz, there was indeed "no place like home" and I had another experience with *serendipity*. While talking to the two women during their pregnancies as I applied the electrodes to their heads in the sleep laboratory, it became clear that I was providing them with a brief vacation from home. They loved coming to the sleep laboratory with its quiet hotel-room atmosphere and no demands from other family members during the night. I was focused on not using data from their first night in the lab because of first-night effects when adapting to a strange sleeping environment. I suddenly realized I was actually studying their recovery from the chronic sleep deprivation they experienced at home every night. I needed to understand their normal sleep patterns while in their own home environment.

Becoming an Independent Researcher

As a result of the postdoctoral funding, I had great mentorship and a research proposal drafted, with feedback, and drafted with feedback, and drafted with feedback – and still my *passion* got me through the process. The draft was a "one-size-fits-all" proposal until I knew where I would be teaching and what resources I would have. I knew that if I could just get my grant submitted, I could *obsess* later about my teaching and lectures. It would take nine months to get the critiques (or pink sheets because they were actually pink carbon copies in those days) and there was no need to think about research again until it was time to revise and resubmit. Meanwhile, I could write manuscripts from my postdoctoral data on shift work and from my collaborations during the clinical experience at the Stanford Sleep Disorders Center. The 5-year R29 application I submitted to NIH was funded, likely because I was at an outstanding institution with great resources available to me, not because of my proposal. My proposal had flaws, but my score and review comments indicated that NIH wanted to invest in me and my *passion* for longitudinal data. My proposal involved collecting sleep and fatigue data on 60 women at seven time points: before ovulation, after ovulation, each trimester, and at 1 month and 3 months postpartum.

My passion for a longitudinal study of nighttime sleep and daytime fatigue in young healthy women was enough to get me through the first 6 months of the 5-year funding. These young healthy women were recruited and enrolled if they were planning their first pregnancy (nullipara), between 25-30 years old, and not planning to move out of the Bay

Area in the next five years. When I wrote my first-year progress report, I had to indicate that I only had one participant thus far. My NIH Program Officer continued the funding for year two, but wanted to know how I was going to remedy the problem. **Lesson Learned No. 3**: Never surprise your NIH Program Officer. **Lesson Learned No. 4**: Always have a positive remedy on hand when you present the problem to your funding agency.

These two lessons turned into the most *serendipitous* experience of my research career. The remedy for my small sample size was not to make it a longitudinal case study of a dyad as they experienced childcare and pre-school, but to broaden my inclusion criteria based on strong rationale: include any woman, of any age, planning any pregnancy as long as another child at home was sleeping through the night. This remedy opened up recruitment and enrollment to multiparas, and they had the easy access to potential nulliparas. I quickly had about half nulliparas in the sample and I was able to document my hypothesis that novice new mothers were most at risk of sleep deprivation and had rationale for the next study (Lee et al., 2000). I became a life-long believer in comparison groups. **Lesson Learned No. 5**: If you do not have evidence that the population you are passionate about is suffering significantly more than another population (for example Latinas more than Caucasians in menopausal transition), if will be difficult to convince funding agencies that it is critical to do the research just on one specific group.

Including the multiparas was also *serendipitous* when it came to designing the follow-up intervention specifically for nulliparas. The intervention strategies for that next study came from the experienced multipara mothers when I talked to them each evening in their homes while applying electrodes, and each morning when I collected the equipment and drew their fasting blood sample for analyses (Lee, Zaffke, & Barette-Beebe, 2001).

I had my clinical caseload and I loved it, but teaching, chairing committees, and community service activities were depleting my reserves and my passion again. I could hire and train more staff to help because of the NIH funding I saved by only having one participant in the first year who was paid $20 for her participation. Each participant was paid cash, but when each planned pregnancy actually happened, I would deliver a basket with tea and crackers at the scheduled first trimester data collection point, and a hand-made baby quilt for her third trimester data collection. With so few participants, I had time to sew quilts for each new baby. In subsequent studies, however, we started in third trimester and easily recruited nulliparas at that point in pregnancy and gave each participant a choice from a package of 6 infant receiving blankets. When we studied the baby's sleep at 2 months of age with a sleep actigraph device, mothers were paid, but also kept the baby socks we had used to cover the ankle device and received a certificate of research participation for their baby book. **Lesson Learned No. 6**: Give your participants the study results and they will follow you anywhere. This lesson comes from my experience as a Research Assistant with Dr. Nancy Woods and her commitment of giving feedback to her participants in the Seattle Women's Health longitudinal study. Our former participants were our best recruitment tool for subsequent studies.

Lesson Learned No. 7: Hire staff with the same *passion* for your research questions, and foster their growth and careers. These staff can get data for their own dissertations, contribute their perspectives and variables of interest to the study, expand your capacity for writing manuscripts and conducting literature reviews, and become co-authors (Gay et al., 2004; Gay et al., 2017). Eventually you will have colleagues across the country (Beebe et al., 2017; Doan et al., 2014; Gallo & Lee, 2008; Goyal et al., 2018; Hudson et al., 2008; Jones et al., 2017; Kennedy et al., 2007; Portillo et al., 2003; Torres et al., 2017).

Lesson Learned No. 8: If you are not in an academic setting with access to passionate students, find collaborators or colleagues with complementary skills. If you are not an *obsessive* detail person, get someone who is. If you have difficulty writing, find a collaborator who is skilled at editing. If you find your *passion* fading, collaborate with someone who brings fresh perspective and new *passion* to the team. If you are frustrated trying to gain access to a population you are passionate about, find a collaborator who has the passion and the access to that population and be patient (Caughey & Lee, 2007; Chesla et al., 2020; Kuster, Sligar & Lee, 2022).

Another *serendipitous* experience during that longitudinal study in the home setting was observing the mothers' partners. Not only were they eager to help with the evening equipment for the sleep study, but women were less likely to volunteer for the study, or more likely to quit the study if their partner was not encouraging or supportive. The next study I designed included sleep and fatigue in fathers-to-be, along with intervention strategies for new parents as they prepared for sleep loss in the early postpartum months. The NIH reviewers did not think that I had a sufficient argument for more research on sleep in women who were pregnant, but they did remark that it was innovative to study fathers. I do not know who my three NIH reviewers were, but at the end of the summary statement, the reviewers listed on the review panel were all men at National Institute of Mental Health. This application was not funded, I lost my passion for a while, and I was worried about losing my trained staff. While looking at NIH calls for applications, I found myself very interested in opportunities to study sleep and fatigue in women during midlife transition (Gilliss et al., 2001) and women with HIV (Lee, Portillo, & Miramontes, 2001). The grant proposal on mothers and fathers was revised and funded a few years later (Gay & Lee, 2004; Gay, Lee, & Lee, 2011). **Lesson Learned No. 9**: Know your audience of reviewers and write the research grant application to appeal to them. But always stay true to research that will advance your agenda. In this case I was true to advancing the science of symptom management (Dodd et al., 2001, Bender et al., 2018).

Conducting Clinical Intervention Trials

There is no disputing the fact that clinical intervention research takes longer and costs more than a survey study, particularly if the design is a randomized clinical trial (RCT) that requires blinding. There is also no dispute that an Assistant Professor needs to publish and cannot really afford to wait for the outcomes of a clinical trial that will result in one publication. **Lesson Learned No. 10**: Always have access to publishable data. Explore options for secondary data from collaborators and think about alternating your research between surveys and RCTs, between clinical populations that are easy to access and difficult to access, or between time-consuming qualitative research and surveys that quickly yield important descriptive data on prevalence or incidence rates. As a word of caution, however, access to a large database with thousands of variables may be expensive and not necessarily efficient or expeditious.

Lesson Learned No. 11: Analyze and publish screening data (Gilliss et al., 2001), baseline data (Jong et al., 2021), and any serendipitous data (Lee & Gay, 2004) along the way while waiting to finally break the code for blinded groups (Lee & Gay, 2011). What we found after two RCTs was that the behavioral-educational intervention worked best for less educated and under-resourced women. We were able to combine these two samples to reach this conclusion and publish the findings, but our biggest contribution to science came from the baseline findings that women who got less sleep in third trimester had 10 hours longer labor and were four times more likely to have a cesarean birth (Lee & Gay, 2004).

Lesson Learned No. 12: Encourage others with similar passions, especially fast-tracking doctoral students with no time for their own longitudinal studies, to take the opportunity to use your data for secondary analyses (Doan et al., 2014; Goyal et al., 2018). Depending on the stage of your project, this can be a win-win in exchange for data collection or data entry, for literature reviews, for course credit, or for co-authorship.

Additional Lessons for the Novice Clinical Researcher

Networking at professional conferences can put you ahead of the curve on innovative methods and research questions. Conference networking facilitates collaborative partnerships and provides a forum for you to discuss designs and methods with other attendees, especially at poster sessions. Look for passionate mentors, interview them about their passion, and get potential research suggestions from them. You can evaluate how close their suggestion is to your own passion, get the mentorship from someone who has resources to help you succeed, and then launch into your passion after completing your training. Alternatively, networking can yield invitations to train with a mentor where you can contribute your perspective and variable of interest to their on-going research. Talk to authors who have published to get their advice about pitfalls and lessons learned. Be part of a team - creating new knowledge takes a variety of perspectives.

Networks also include websites and databases such as NIH RePORTER (reporter.nih.gov) where you can search keywords and geographic locations to find Principal Investigators (PIs) with NIH-funded research. You should read the abstracts and see who, and what, has been funded. You can see PIs as potential consultants, collaborators, or competition, the NIH institute that funded the PI, and the Program Officer assigned to the grant. The PI is likely to be a peer reviewer on your grant applications or manuscripts. The PI may be willing to share their funded application with you, tell you about their next steps, or confirm that you are proposing to address a gap in knowledge. Talk to a friendly and responsive Program Officer or funding agency representative early on in the process before you submit your application, and obtain an example of a funded application from a colleague at your institution. If the agency is not particularly responsive, it may indicate that your idea or elevator speech needs more polish.

Getting and giving constructive *feedback* should be a pleasurable life-long learning opportunity. I learned to label my students' manuscripts and proposal drafts with an extension of "…Draft 1 of 10" to make it clear from the beginning that it is a work in progress. When the document is finalized at "Draft 4 of 10" then everyone is happy and no one is disappointed by unrealistic expectations. As you obsess about perfecting a research proposal, keep track of issues you debated with your reviewers and use that material for the strengths and limitations in your submitted proposal that is critiqued by external reviewers.

Finally, place your research passion within the context of a *significant health issue* and be prepared to articulate that in 2-3 sentences or an "elevator speech" that captures the attention of a busy or distracted audience. When I wanted to study sleep deprivation in the intensive care unit someone said to me, "Kathy, no one ever died of sleep deprivation" and I did not have that elevator speech handy. I shelved that research question until postoperative delirium became a significant health care issue and symptoms of sleep deprivation could be linked to symptoms of delirium. I was a dissertation committee member for a doctoral student (Figueroa-Ramos et al 2009) and collaborated with an Anesthesiology researcher (Leung, et al., 2015). For me, the National Sleep Foundation, and other professional sleep organizations have the relevant data and elevator speeches for why it is important to study sleep. Essential resources for the significance of a health issue also includes recommendations from Healthy People 2020 for example, or from organizations such as NIH, the Centers for Disease Control and Prevention (CDC), American Academy of Sleep Medicine (AASM), and World Health Organization (WHO).

Recognize that your passion can wax and wane. You may not recognize serendipity when you experience it, but stay flexible as you tunnel through your research trajectory. Do not give up, but do listen and heed the advice of others who have the experience to keep you out of harm's way.

Be Patient - What Goes Around Comes Around

I have shared with you selected experiences from my career, sometimes finding significant results by chance rather than by a planned study design or hard work. You can see evidence of my success with obtaining NIH funding, and you can read publications of my research findings. What you do not see is my *persistence* and being *obsessive* about having funding for research staff continuity and for training students, or for getting manuscripts published – one re-submission after another. The biggest lesson of all is getting the mentorship to guide you in finding the right venue for the research you want to do, the right audience to appreciate what you propose to do, the right peers to review your work, the right funding agency, the right journal audience, and the right collaborators to complement your skills.

My research describing sleep and fatigue symptoms in healthy women at various reproductive stages was supplemented along the way by descriptive studies with women and men living with HIV, and with caregivers (Castro et al., 2005; Byun et al., 2016). I had collaborated on a drug intervention study for relief of menopausal symptoms (Dorsey et al., 2004) and a systematic review of pharmacologic interventions for restless legs syndrome (RLS) during pregnancy (Picchietti et al., 2015). Until I was certified in Behavioral Sleep Medicine (BSMc) in 2005, I felt unqualified to design behavioral sleep interventions but I obsessed about testing my intervention ideas before I retired. I want to end my talk by illustrating my persistence with women's health research using a few final examples. I completed the descriptive study on shift work in 1992 for my RWJ postdoctoral research but was told I could never get funding to study nurses. Fast forward 10 to 20 years, and I was serving on panels for the American Academy of Sleep Medicine and American Nurses Association and recommending evidence-based guidelines for shift workers and shift work sleep disorder. I became a co-investigator on three NIH Small Business Initiative Research (SBIR) grants when a cognitive psychologist introduced himself to me at an NIH conference after my presentation. He invited me to collaborate on grant applications to test behavioral sleep interventions for women. The first two successful grants involved intervention for nurses working night shift; the first grant for nurses over 40 years old with the goal of improving sleep to keep them in the workforce, and the second grant for new nurse graduates with the goal of improving sleep before beginning permanent night shift (Lee, Gay, & Alsten, 2014). Our third successful SBIR grant application involved a cognitive-behavioral intervention during pregnancy (Lee, Gay, & Alsten, 2016).

Conclusion

With newer technology in the form of sleep sensors, and with endless nursing strategies to test with diverse populations who suffer with insomnia or fatigue symptoms, the potential for research is limitless. It was my goal today to share my passion for research with a balanced perspective of times when I was discouraged by "ooops" or another lesson learned. In the course of your career, you may have ***o**pportunity*, and be ***o**bsessive* about that next grant or manuscript, or about getting that academic promotion, but you should always be looking for the ***p**assion* and the ***s**erendipity* that moves your scholarship forward.

References

Beebe, K. R., & Lee, K. A. (2007). Sleep disturbance in late pregnancy and early labor. *Journal of Perinatal Neonatal Nursing*, 21, 103-108.

Beebe, K. R, Gay, C. L., Richoux, S. E., & Lee, K. A. (2017). Symptom experience in late pregnancy. *Journal of Obstet Gynecol Neonatal Nursing*, 46, 508-520.

Bender, M., Janson, S., Franck, L. S., & Lee, K. A. (2018). A middle range theory of symptom management. In Smith, M. J. & Liehr, P. R. (Eds.). *Middle Range Theory for Nursing,* Chapter 8, pp. 147-177). New York: Springer Publishing, 4th Edition.

Bliwise, D. L., Carroll, J. S., Lee, K. A., Nekich, J. C., & Dement, W. C. (1993). Sleep and sundowning in nursing home patients with dementia. *Psychiatry Res*, 48, 277-292.

Brown, M. K., Laposky, A. D., Buckler, A. G., et al. (2020). NIH research conference on sleep and the health of women. *Journal of Women's Health*, 29, 427-429

Byun, E., Lerdal, A., Gay, C. L., & Lee, K. A. (2016). How adult caregiving impacts sleep: A systematic review. *Current Sleep Medicine Reports*, 2, 191-205.

Castro, C. M., Lee, K. A., Bliwise, D. L., Urizar, G. G., Woodward, S. H., & King, A. C. (2009). Sleep patterns and sleep-related factors between caregiving and non-caregiving women. *Behavioral Sleep Medicine*, 7, 164-179.

Caughey, A.B., & Lee, K. A. (2007). CPAP for the prevention of preeclampsia: Is this a clinically promising intervention? *Sleep Medicine*, 9, 1-2.

Chesla, C. A., Gay, C., Bauer, L., Bender, M. S., & Lee, K. (2020). Preventing type 2 diabetes among midlife women: A feasibility study comparing a combined sleep and lifestyle intervention with a standard lifestyle intervention. *The Diabetes Educator*, 46, 424-434.

Doan, T., Gay, C. L., Kennedy, H., Newman, J., & Lee, K. A. (2014). Nighttime breastfeeding behavior is associated with more nocturnal sleep among first-time mothers at one month postpartum. *Journal of Clinical Sleep Medicine*, 10, 313-319.

Dodd, M., Janson, S., Facione, N., Faucett, J., Froelicher, E. S., et al. (2001). Advancing the science of symptom management. *Journal of Advanced Nursing*, 33, 668-676.

Dorsey, C. M., Lee, K. A., & Scharf, M. B. (2004). Effect of zolpidem on sleep in women with perimenopausal and postmenopausal insomnia: A 4-week, randomized, multi-center, double-blind, placebo-controlled study. *Clinical Therapeutics*, 26, 1578-1586.

Figueroa-Ramos, M. I., Arroy-Novoa, C. M., Lee, K. A., Padilla, G., & Puntillo, K.A. (2009). Sleep and delirium in ICU patients: A review of mechanisms and manifestations. *Intensive Care Medicine*, 35, 781-795.

Gallo, A., & Lee, K. A. (2008). Sleep characteristics in hospitalized antepartum patients. *Journal of Obstet Gynecol Neonatal Nursing*, 37, 715-721.

Gay, C. L., Lee, K. A., & Lee, S. (2004). Sleep patterns and fatigue in new mothers and fathers. *Biological Research for Nursing*, 5, 311-318.

Gay, C. L., Richoux, S. E, Beebe, K.R., & Lee, K. A. (2017). Sleep disruption and duration in late pregnancy is associated with excess gestational weight gain among overweight and obese women. *Birth*, 44, 173-180.

Gilliss, C. L., Lee, K. A., Gutierrez, Y., Taylor, D., Beyene, Y., Neuhaus, J., & Murrell, N. (2001). Recruitment and retention of healthy minority women into community-based longitudinal research. *J Women's Health and Gender-Based Medicine*, 10, 77-85.

Goyal, D., Gay, C., Torres, R., & Lee, K. A. (2018). Shortening day length: A potential risk factor for perinatal depression. *Journal of Behavioral Medicine*, 41, 690-702.

Hudson, A. L., Portillo, C. J., & Lee, K. A. (2008). Sleep disturbances in women with HIV or AIDS: Efficacy of a tailored sleep promotion intervention. *Nurs Res*, 57, 360-366.

Jong, S., Gay, C. L., & Lee, K. A. (2021). Daytime and nighttime correlates of fatigue and lack of energy in adults living with HIV. *Chronic Illness*, 17, 463-474.

Kennedy, H., Gay, C. L., Gardiner, A., & Lee, K. A. (2007). Negotiating sleep: A qualitative study of new mothers. *Journal of Perinatal Neonatal Nursing*, 21, 114-122.

Kuster, A., Sligar, K., & Lee, K. A. (2022). A quality improvement project to increase postpartum clinic visits for publicly-insured patients. *Journal of Obstet Gynecol Neonatal Nursing* (in press).

Lee, K. (1982). Rest and comfort status. In P. H. Mitchell & A. Loustau (Eds.). *Concepts Basic to Nursing*. New York: McGraw-Hill.

Lee, K. A. (2011). Sleep promotion in the childbearing family. In N. S. Redeker, & G. Phillips McEnany (Eds.). *Sleep Disorders and Seep Promotion in Nursing Practice*, Chapter 16, pp. 261-276. New York: Springer Publishing Company, 1st edition.

Lee, K. A. (1988). Circadian temperature rhythms in relation to menstrual cycle phase. *Journal of Biological Rhythms*, 3, 255-263.

Lee, K. A. (1992). Self-reported sleep disturbances in employed women. *Sleep*,15,493-498.

Lee, K. A., & DeJoseph, J. (1992). Sleep disturbance, vitality, and fatigue among a select group of employed childbearing women. *Birth*, 19, 208-213.

Lee, K. A, Dziadkowiec, O., & Meek, P. (2014). A systems science approach to fatigue management in research and health care. *Nursing Outlook*, 62, 313-321.

Lee, K. A., & Gay, C. L. (2004). Sleep in late pregnancy predicts length of labor and type of delivery. *American Journal of Obstetrics and Gynecology*, 191, 2041-2046.

Lee, K. A., & Gay, C.L. (2011). Can modifications to the bedroom environment improve sleep of new parents? Two randomized controlled trials. *Res Nurs Health*, 34, 7-19.

Lee, K. A., Gay, C., Portillo, C. J., et al. (2012). Types of sleep problems in adults living with HIV/AIDS. *J Clinical Sleep Medicine*, 8, 67-75.

Lee, K. A., Gay, C. L, & Alsten, C.R. (2014). Home-based behavioral sleep training for shift workers: a pilot study. *Behavioral Sleep Medicine*, 12, 455-468.

Lee, K. A., Gay, C. L., & Alsten, C. R. (2016). Sleep enhancement training for pregnant women. *Obstet Gynecology*, 128, 964-971.

Lee, K. A., & Gay, C. L. (2017). Improving sleep for hospitalized antepartum patients: A non-randomized controlled pilot study. *J Clinical Sleep Medicine*, 13, 1445-1453.

Lee, K. A., Hicks, G., & Nino-Murcia, G. (1991). Validity and reliability of a scale to assess fatigue. *Psychiatry Research*, 36, 291-298.

Lee, K. A., Landis, C., Chasens, E. R., Dowling, G., … Shaver, J. F.(2004). Sleep and chronobiology: Recommendations for nursing education. *Nurs Outlook*, 52, 126-133.

Lee, K.A., & Lipscomb, J. (2003). Sleep among shiftworkers: A priority for clinical practice and research in occupational health nursing. *AAOHN Journal*, *51*, 418-420.

Lee, K. A., McEnany, G., & Zaffke, M.E. (2000). REM sleep and mood state in childbearing women: Sleep or weepy? *Sleep*, 23, 877-885.

Lee, K. A., Meek, P., & Grady, P. A. (2014). Advancing nursing science: nurse researchers lead the way. *Nursing Outlook*, 62, 301-302.

Lee, K.A., Portillo, C., & Miramontes, H. (2001). The influence of sleep and activity patterns on fatigue in women with HIV/AIDS. *J Assoc Nurses AIDS Care*, 12, 19-27.

Lee, K. A., & Rosen, L. A. (2012). Sleep and human development. In C. Morin & C. Espie (Eds.). *Oxford Handbook of Sleep and Sleep Disorders*. Chapter 4, pp. 75-94, Oxford: Oxford University Press, Inc., 1st edition.

Lee, K., Shaver, J., Giblin, E., & Woods, N. (1990). Sleep patterns related to menstrual cycle phase and and premenstrual affective symptoms. *Sleep*, 13, 402-409.

Lee, K. A., Zaffke, M. E., & McEnany, G. (2000). Parity and sleep patterns during and after pregnancy. *Obstetrics & Gynecology*, 95, 14-18.

Lee, K. A., Zaffke, M. E., & Barette-Beebe, K. (2001). Restless legs syndrome and sleep disturbance during pregnancy: The role of folate and iron. *J Women's Health and Gender-Based Medicine*, 10, 335-341.

Leung, J. M, Sands, L. P., Newman, S., Meckler, G., Xie, Y., Gay, C., & Lee, K. (2015). Preoperative sleep disruption and postoperative delirium. *Journal Clinical Sleep Medicine*, 11, 907-13.

Matsumoto, A. M., Sandblom, R. E., Schoene, R. B., Lee, K. A., et al. (1985). Testosterone replacement in hypogonadal men: Effects on obstructive sleep apnea, respiratory drives, and sleep. *Clinical Endocrinology*, 22, 713-721.

Mitchell, E. S., & Woods, N. F. (1996). Symptom experiences of midlife women: observations from the Seattle Midlife Women's Health Study. *Maturitas,* 25, 1-10.

National Institutes of Health. (2005). State of the science conference statement: Management of menopause-related symptoms. *Annals Internal Med,* 142, 1003-1013.

National Sleep Foundation (www.sleepfoundation.org).

Nowakowski, S., Meers, J. & Heimbach, E. (2013). Sleep and women's health. *Sleep Medicine Research*, 4, 1-22.

Picchietti, D. L., Hensley, J. G., Bainbridge, J. L., Lee, K. A., Manconi M, … International Restless Legs Syndrome Study Group (IRLSSG). (2015). Consensus clinical practice guidelines for the diagnosis and treatment of restless legs syndrome/Willis-Ekbom disease during pregnancy and lactation. *Sleep Medicine Review*, 22, 64-77.

Portillo, C. J., Tom, L., Lee, K. A., & Miramontes, H. (2003). Physical and mental fullness as descriptors that influence sleep in women with HIV. *Holistic Nurs Pract*, 17, 91-98.

Rittenhouse, C. A., & Lee, K. A. (1993). Biopsychosocial correlates of perceived perimenstrual weight gain. *J Women's Health*, 2, 145-148,1993.

Sandblom, R. E., Matsumoto, A. M., Schoene, R. B., Lee, K. A., et al (1983). Obstructive sleep apnea syndrome induced by testosterone administration. *New England J Med*, 308, 508-510.

Shaver, J., Giblin, E., Lentz, M., & Lee, K. (1988). Sleep patterns and stability in perimenopausal women. *Sleep,* 11, 556-561.

Torres, R., Goyal, D., Burke-Aaronson, A. C., Gay, C. L., Lee, K. A. (2017). Patterns of perinatal depression and stress in late adolescent and young adult mothers. *J Obstet Gynecol Neonatal Nursing*, 46, 814-823.

“NOT EVERYBODY APPROACHES IT THAT WAY”: HOW NURSE-TRAINED PUBLIC HEALTH DIRECTORS LEAD

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INTRODUCTION

The COVID-19 pandemic has highlighted the need for a responsive and effective public health system; strong public health leadership is an essential part of this. Public health workforce literature points to the particular need for leaders who possess skills in policy development, persuasive communication, systems thinking and coalition-building.[1,2] In the U.S., local health department (LHD) directors are an important part of public health leadership, responsible for setting an LHD’s vision and strategy and ensuring availability of resources to carry out this out.[3] Evidence suggests that nurses, given their education and skills, are important for public health leadership--including collaboration and partnering, a transformational leadership style, and broad knowledge regarding communities.[4-6] Literature on hospital nurse executives describes these nurses as excellent communicators, with an ability to hold a “total organization view”.[7] In addition, several studies have found that a nurse-trained LHD director, compared to LHD directors with other backgrounds, is associated with positive LHD performance and better disparity outcomes.[8-11]

Despite evidence pointing to nurse leaders as being important partners in public health, the percent of LHD directors with nursing degrees in the U.S. has decreased 11% since 2010.[3] This is amidst a larger decline in the U.S. public health nurse (PHN) workforce overall.[5] Yet, due to a lack of clarity regarding the value PHNs, including PHN leaders, bring to public health, this decline is predicted to continue.[12]

The small number of studies focused on nurse LHD directors have been approached quantitatively and lack depth in providing an understanding of how such directors approach their work.[8,10] This qualitative study aimed to address these gaps by exploring the specific strategies used by nurse LHD directors in order to identify what nurses uniquely bring to LHD leadership and how that might be connected to evidence regarding their apparent influence on LHD performance.

DESIGN & METHODS

This qualitative study employs a critical thematic analysis approach in analyzing all data.[13,14] This methodology supports analysis that explores the individual and shared experiences of participants while being aware of external influences such as the economic, social, and historical contexts; social and hegemonic structures; and institutional power. Analyzing practices and strategies described by participants in this context provides insight into how they do their work.

Participants were recruited via snowball sampling, with contacts made either to LHD directors known to the lead investigator or through connections to other practice leaders. Inclusion criteria were as follows: (a) current position as an LHD director, (b) possession of an active nursing license and (c) at least 3 years of experience as a director in an LHD. Efforts were made to recruit participants from rural and urban settings across the U.S.

Semi-structured, recorded interviews of 45-60 minutes were conducted virtually with nurse directors between July and September 2020. Questions focused on the nurse’s experience as an LHD director, strategies used to accomplish their work, how their nursing education and training influenced their leadership, and challenges faced. After verbal consent, interviews were conducted in a conversational fashion, with care taken to establish a non-hierarchical environment, giving space for participants to focus on areas of greatest importance to them.[15] This study was considered exempt from Human Subjects review.

Using the process for critical thematic analysis, codes were generated first through open coding, with the researcher paying close attention to repeated or recurring patterns in the data and, second, through a closed coding process, whereby the researcher analyzed connections between interview themes and social and political contexts, positions of power, and hierarchical structures.[14] Codes were then grouped by major themes and subthemes.[13]

Multiple strategies were employed to assure rigor and reflexivity. One transcript was coded in conjunction with a study team member to establish interrater agreement. Rigor was also maintained via memo-writing for individual interviews and regular check-ins with study team members. A final summary of major themes was shared with participants prior to publication to ensure their experiences and perspectives were portrayed accurately.[15,16]

RESULTS

A total of 13 LHD directors with nursing degrees were interviewed. Participants directed agencies in rural and urban areas across the country, with experience as a director ranging from 3-20 years.

Participants described both *what* strategies they employed to support LHD performance as well as *how* they employed these. The major themes detailed below focus on the "how" as they provide a distinct picture of the *nursing* approach to public health leadership. These major themes included *an other-focused lens*, *theoretical knowledge*, *the political side of their role*, and *their nursing identity*.

Approaching work with an other-focused lens

Participants described entering public health as a "calling" and illustrated an other-focused lens that was *grounded in empathy*, *inclusive*, and *valued integrity*. Several participants stated that as nurses, having "*a different way of looking at the world*" gave them an advantage as public health directors.

Grounded in empathy. Previous direct care experience or *"getting in the muck of the daily grind"* was cited as important to participants' empathy. Such experiences helped them understand other perspectives and be present in "*intense*" moments; these abilities were essential for partnership-building and having a trusted reputation in the community. One participant noted that this empathetic approach, figuring out "*why is this person asking this question?*" is unique and "*maybe not everybody approaches it that way.*"

Inclusive. Participants described an ability to think and approach situations inclusively, as leaders and in their community work. As leaders, they emphasized regularly asking questions such as "*have we included everybody?[...] left out something?*" Such questions were an important part "*of setting that expectation so hopefully when I'm not in the room somebody else is asking those same questions.*" In their work with community, their approach centered on equitable partnerships with community members, where they had decision-making power and seats "*at the table.*" Several participants noted that difficulties faced under previous leadership may have been related to predecessors' interest in doing what they saw as right or "popular" rather than being inclusive.

Valued integrity. Participants also operated through a core value of integrity. They cared that the community trusted them to follow through and be accountable and that "*people know we are who we say we are*" regardless of whether they always agree. Operating with integrity was described as important in managing high stress situations and for communicating the limits of what public health could and could not do. This included good stewardship of resources, owning mistakes, and committing to changing systems and structural inequities. One participant pointed to this with regard to addressing racism:

> *Institutions will want to stay how they are […] and so if we're really going to address racism, you have to be into it for the long haul and you have to understand how you're going to show up as a leader. My nursing education particularly […] shaped that.*

Applying Theoretical Knowledge to their Work

Participants viewed their theoretical knowledge and background gained in their nursing education as an asset. This was evident in how they *employ the nursing process* – assessment, planning, diagnosis, and evaluation – and *engage in systems thinking*.

Employ the nursing process. Participants discussed using the nursing process in their daily work--how it sets them apart from other types of leaders in their ability to observe and understand human behavior and assess and work through complex situations. Many described it as "*ingrained*" in them, since nursing school.

Use of the nursing process was particularly emphasized with respect to managing change in the organization. Participants noted that assessing for and implementing a plan to address concerns helps with gaining staff buy-in. The nursing process was also important in learning and managing multiple types of programs, including those outside of typical nursing areas of expertise. Participants also highlighted using the nursing process in work with communities, as it facilitated going beyond surface-level questions of "what is happening" to, "why is this happening"? As one participant noted:

> *You have to define assessment with a few new tools […]. Maybe your stethoscope doesn't work in the community, but…maybe […] social media is your stethoscope. What are people talking about? […] What is the issue? […] How do we find and evaluate it?*

Engage in systems thinking. To really succeed in their role, participants stated that systems thinking was critical. They emphasized it as essential in balancing long-term planning for their agency while also thinking about daily operations. Systems-thinking also afforded them an ability to understand and facilitate collaboration at multiple levels of their agency, while helping "*build [values] into the system,*" such as trauma-informed care.

Participants credited their ability to understand systems to the settings in which they had trained and worked as a nurse. These settings gave an opportunity to appreciate different approaches to health--how different systems operated, their strengths and limitations, and the value of systems change. As one participant noted:

> *The thing that really sort of turned me on about nursing […] was the ability to […] look at systems and how they impact things. […] You have to do that in public health because if you don't, you're missing the boat.*

Navigating the political side of their role

Participants were realistic about the political nature of the job and their reliance on county government for funding. They noted that understanding and navigating this was important to informing policy for moving the department forward and promoting health. Participants described skills in *strategic communication* and *collaboration and relationship-building*, plus *persistence in the face of adversity* and an ability to *manage up*.

Strategic communication. In the context of their relationships with county officials, participants described exerting influence through strategic and persuasive communication. They noted that their competence in this area was important for securing respect and authority with officials, of being able to persuade them to support controversial programs or policies, and of identifying common ground among agendas. One participant stated:

> *My responsibility is to make sure that the public health department […] is moving forward for the health and protection of the community. So I always started with where our programs are right now, what the community [and] elected officials expect of us; matched with what we know we need to do and if there's a gap there […], then it's my job to […] message that so that there's alignment.*

Collaboration and relationship-building. Finding and building on places of connection were important to relationships with county officials. Participants discussed nurses' ability to understand others, stating it brought "*a potential source of wisdom to the table"* and was instrumental in collaborating. Participants noted that the value nurses place in relationship-building may influence outcomes differently than what is seen in clinical professions outside of nursing.

> *I think clearly nurses by the very nature of how we have to do our work, [...]we know how we have to establish a relationship. [...] It's not the same as other providers where you come and go. In a lot of instances, the ability to get care happening relies on that relationship.*

Persistence in the face of adversity. Navigating the political nature of the job had its own challenges–-acceptance of and growth from these experiences were factors in their ability to accomplish their work. They discussed the importance of addressing these challenges directly, such as when being insulted, and also of making the choice to move forward without taking things personally in this role.

Several female participants, however, discussed ways they had been socialized, as nurses and as women, to "just work harder" in the face of difficulties rather than advocate for themselves. One participant noted that this might be a disadvantage, compared to non-nurses or a group not socialized this way, when communicating a need for support or funding. Others highlighted challenges associated with male-dominance in decision-making. Still, these participants contended that such challenges offered them an opportunity to build connection with other female or nursing leaders, which was important to their perseverence amidst these difficulties. Participants attributed their ability to handle difficult situations to their nursing education, training, and experiences, with one stating:

> *You need to have hard conversations, you need to give bad news, you have to be with people in intense moments that are often unlike a lot of other professions. So I think that it allows me [...] to be comfortable in a lot of uncomfortable settings. [...] That's a skill that needs to be developed for a leader to be effective and for a leader to have any sort of longevity.*

Managing up. Participants described their relationships with and the role of county officials in a way that illustrated a power imbalance, using words such as "boss," and "oversight," noting that county officials often control funding and thus "*hold the power."* One participant stated, "*[Having] a board of commissioners who is supportive of public health is so important."* Participants noted the need to "manage up" due to this differential, particularly when the official had an alternate agenda. They described balancing appeasing various parties while also staying focused on vital work:

> *It's really important to have someone who is able to weather the storm, be strategic and be able to move things. [...] Knowing those moments when you need to go big [...] and when it's best to take the more subtle approach [...] is critical.*

Leveraging their nursing identity

Participants emphasized the advantage afforded them by being explicit about their credentials as a nurse, noting the power it held in establishing relationships with staff, elected officials, partners, and the larger community. One discussed leveraging her nursing identity this way:

I think that nurses are trusted around the country, [...] everybody's got a nurse in their family somewhere. It builds a connection. So, I use it strategically as well as just feel that professionally it's important.

DISCUSSION

This study articulates a distinctive combination of leadership skills that nurse public health directors bring to their LHDs and to the communities they serve. Past studies have demonstrated that the nurse public health director has a positive association with LHD performance.[8,9] This study adds insight into what might underlie that relationship, illustrating what strategies nurse public health directors use and how they employ these strategies in order to both support public health performance and community health equity.

Results presented here add to nursing and public health leadership literature in several ways. A recent quantitative study found that nurse public health directors, as compared to non-nurses, were more likely to have completed a community health assessment and to engage in policy activities, corroborating the emphasis that participants placed on assessment and the value of policy in the current study.[17] Results in this qualitative study also revealed the public health nurse leaders' capacity to "manage up" in navigating the political side of their role. In previous research, such a skill was noted to be essential for public health leaders in effectively accomplishing their work due to various power structures present in most organizations.[18] Finally, participants' abilities to see the big picture while understanding its effects at a minute level, as well as their nuanced understanding and application of the nursing process, demonstrates significant strengths nurses bring to leadership. Such themes have been discussed in relation to hospital nursing executives but have not previously been highlighted with respect to public health nurse leaders.[19,20]

Through acknowledging the hierarchical structures within which nurse public health directors work and succeed, this study represented a unique opportunity to elicit shared experiences, while using critical methodologies that interrogate power.[14] This perspective is often missing in nursing leadership studies, resulting in an incomplete understanding of their experience.[21] Experts have further asserted that while nurses are increasingly represented in leadership overall, many systems still fail to treat them as equal partners in decision-making processes.[20] While noting difficulties they faced as nurses; participants in this study demonstrated an ability to effectively work among sociopolitical structures to engage in policy development at many levels. Such perspectives provide insight into how nurse public health directors lead and offer a model for other areas of nursing leadership.

Public health organizations, including health departments, must engage in effective approaches to address inequities. Evidence presented here suggests that nurse public health directors – through their inclusive approach, way of partnering with the community, systems thinking, and political acumen - possess attributes stressed by health equity researchers as essential in health equity work.[1,2,22] As such, nurses may provide a type of leadership critical to advancing equity in population health.

Limitations

Strategies were undertaken to mitigate this study's limitations. First, all interviews were conducted using an interview guide to ensure all participants received the same information. Second, investigators acknowledged their own assumptions and potential to influence analysis, reducing the possibility of bias in the result. Finally, credibility was sought through interrater agreement as well as participant member-checking. Nonetheless, a potential for bias exists due to limited sample size, lack of diversity, and data collection taking place during the COVID-19 pandemic, a non-typical period for these nurse leaders.

CONCLUSION

This study provides insight into the practice of the nurse public health director and highlights their strengths as leaders. This brings deeper clarity to the relationship between the nursing leader's practice, LHD performance and a healthy population. Such evidence can be used to inform policy and practice with respect to effectively employing nurse leaders in carrying out significant public health work, both locally and globally.[i]

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[i] This study was supported by funding from the Robert Wood Johnson Foundation Future of Nursing Scholars Program, ID#: 566403

References

1. Wolf L, Vigna AJ, Inzeo PT, Ceraso M, Wolff T. From roots to results: A qualitative case study of the evolution of a public health leadership institute building capacity in collaborating for equity and justice. *Health Educ Behav.* 2019;46(1):33S-43S.
2. Fraser M, Castrucci B, Harper E. Public health leadership and management in the era of public health 3.0. *J Public Health Manag Pract.* 2017;23(1):90-92.
3. NACCHO. *2019 national profile of local health departments.* Washington, DC: National Association of County and City Health Officials;2020.
4. Reyes DJ, Bekemeier B, Issel LM. Challenges faced by public health nursing leaders in hyperturbulent times. *Public Health Nurs.* 2014;31(4):344-353.
5. Swider SM, Levin PF, Reising V. Evidence of public health nursing effectiveness: A realist review. *Public Health Nurs.* 2017;34(4):324-334.
6. Martsolf GR, Sloan J, Villarruel A, Mason D, Sullivan C. Promoting a culture of health through cross-sector collaborations. *Health Promotion Practice.* 2018;19(5):784-791.
7. Lúanaigh PÓ, Hughes F. The nurse executive role in quality and high performing health services. *J Nurs Manag.* 2016;24(1):132-136.
8. Bhandari MW, Scutchfield FD, Charnigo R, Riddell MC, Mays GP. New data, same story? Revisiting studies on the relationship of local public health systems characteristics to public health performance. *J Public Health Manag Pract.* 2010;16(2):110-117.
9. Scutchfield FD, Knight EA, Kelly AV, Bhandari MW, Vasilescu IP. Local public health agency capacity and its relationship to public health system performance. *J Public Health Manag Pract.* 2004;10(3):204-215.
10. Bekemeier B, Jones M. Relationships between local public health agency functions and agency leadership and staffing: A look at nurses. *J Public Health Manag Pract.* 2010;16(2):e8-e16.
11. Kett PM, Bekemeier B, Herting JR, Altman MR. Addressing health disparities: The health department nurse lead executive's relationship to improved community health. *J Public Health Manag Pract.* 2021.
12. Kub JE, Kulbok PA, Miner S, Merrill JA. Increasing the capacity of public health nursing to strengthen the public health infrastructure and to promote and protect the health of communities and populations. *Nurs Outlook.* 2017;65(5):661-664.
13. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology.* 2006;3(2):77-101.
14. Lawless B, Chen Y-W. Developing a method of critical thematic analysis for qualitative communication inquiry. *Howard Journal of Communications.* 2019;30(1):92-106.
15. Leavy P. *The Oxford handbook of qualitative research.* Oxford library of psychology; 2014.
16. McMillan K, Perron A. Nurses' engagement with power, voice and politics amidst restructuring efforts. *Nurs Inq.* 2020;00:e12345.
17. Authors et al. 2021. Removed for blind peer review process.
18. Miner Gearin KJ, Thrash AM, Frauendienst R, et al. Measuring the authority of local public health directors in the context of organizational structure: an exploratory, multimodal approach. *J Public Health Manag Pract.* 2012;18(6):545-550.

19. Akbiyik A, Akin Korhan E, Kiray S, Kirsan M. The effect of nurses' leadership behavior on the quality of nursing care and patient outcomes. *Creat Nurs.* 2020;26(1):e8-e18.
20. Salvage J, White J. Nursing leadership and health policy: everybody's business. *Int Nurs Rev.* 2019;66(2):147-150. doi: 110.1111/inr.12523. Epub 12019 May 12523.
21. Aspinall C, Jacobs S, Frey R. Intersectionality and critical realism: A philosophical framework for advancing nursing leadership. *Advances in Nursing Science.* 2019;42(4):289-296.
22. Betancourt JR, Tan-McGrory A, Kenst KS, Phan TH, Lopez L. Organizational change management for health equity: Perspectives from the disparities leadership program. *Health Aff (Millwood).* 2017;36(6):1095-1101.

ABSTRACTS OF SYMPOSIUM PRESENTATIONS

Overview: An Innovative Planning Approach to Developing a Novel 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 purpose is to equip newly graduated primary care NPs with the ability to provide excellent primary care services to patients in under-resourced areas through a comprehensive clinical residency program that expands new graduate NP clinical knowledge and skills. 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. These NPs will also strengthen skills in some specialty areas including wound care, addiction and pain management, telehealth, and chronic disease management.

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. There is a significant shortage of primary care providers in these counties and few specialty resources reinforcing the need for competent and confident primary care providers with advanced skills and knowledge. A 2019 Report of the California Future Health Workforce Commission concluded, "California's health system is facing a crisis, with rising costs and millions of Californians struggling to access the care they need". This residency seeks to address some of these workforce challenges.

Methods and Approach: Planning for this project involved working with several community and academic partners. We formed 4 workgroups that focused on admissions, education delivery methods, curriculum, and clinical rotations along with an Advisory Board that provided oversight. We partnered with 6 Federally Qualified Health Centers (FQHCs) in surrounding counties to participate in each of the workgroups along with SON and SOM faculty and grants staff. The workgroups met monthly for the first year of planning and the first 6 months of year two and then me quarterly with the focus on building the program in year 1 and then monitoring the implementation in year 2. Each workgroup had a specific charge that came from the Project Director, but then set specific goals, established a timeline, and reported progress to the Advisory Council, who often provided feedback or made recommendations for change. In year 2 as the program was implemented, the workgroups were focused more on quality improvement to enhance the program.

Assessment of Findings/Outcomes Achieved: At the end of the planning year, the project had agreed upon residency goals, a complete and prioritized curriculum, integrated educational delivery methods and faculty to teach the sessions, standards for the clinical rotations, and an evaluation process. Advanced NP PRACTICE was implemented on time, with 10 qualified NP Residents who had assigned clinical sites, and a completed education curriculum.

Conclusions: Partnering with the FQHCs in an Advisory Group/workgroup structure was effective in designing and implementing a new NP residency program. This symposium will describe the Advisory Council and the work groups in more detail.

Funding: Funded by Health Resources and Services Administration, grant # T14HP33203

AN INNOVATIVE PLANNING APPROACH TO DEVELOPING A NOVEL NP RESIDENCY PROGRAM

Oversight and Quality Improvement in an NP Residency Program Partnership

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Purposes/Aims: The purpose of this presentation is to describe how an advisory council (AC) work group was used in the planning and pilot year of starting a HRSA funded, primary care focused nurse practitioner (NP) residency program.
Rationale/Background: The first formal primary care NP residency program was created in 2007 to address the challenges that novice NPs experience when entering the workforce as primary care providers. Research has shown that novice NPs can take up to a year to feel confident in managing their patient panel NP residency programs are usually one year long and provide additional support including guidance, an incremental patient panel, and educational opportunities. Designing a new primary care NP residency program that is based at a SON but whose NP residents practice at academic center clinics as well as FQHCs not affiliated with the SON requires having a strong infrastructure built with leadership support from all partners in the organizations in the form of an advisory council work group.
Methods and Approach: The SON had one year to plan the launch of the NP residency and recruit an advisory council. Given that the NP residency is only partly funded by a federal grant, clinical sites must pay at least half of the NP salary for the 12-month residency. This financial commitment translated into having a very strategic approach for the Advisory Council (AC) work group membership. Senior leaders with decision making power representing the SON, academic center clinics, and FQHCs were invited to join. The AC met monthly during the planning year and represented all the organizations, which allowed the SON to better understand concerns and challenges. The advisory council also evaluated schedule models and their impact on provider productivity as well as the clinic's resources. Once the NP residency launched, the Advisory Council continued to meet quarterly to share best practices and address challenges.
Assessment of Findings/Outcomes Achieved: At the residency launch, all the clinical sites were ready to welcome NP residents. The AC became a functional working group with an environment conducive to productive communication and decision-making and had multiple accomplishments. They decided on a schedule, identified a preceptor at their clinic site, and created EHR templates to match the demands and expectations of the NP residents. Productivity reports after the first year of the NP residency demonstrated that the clinics recovered their investment even with the NP residents having educational commitments. Most clinical sites were highly satisfied with the program and decided to continue as partners in the NP residency. The NP residency also served as a recruitment tool as some NP residents were hired at their clinical site.
Conclusions: Having an advisory council work group to help design an NP residency program can be very useful particularly if several organizations are involved. An advisory council can be the forum to resolve common challenges and find solutions to unique issues. It also could help build buy-in from the different partner organizations and improve their readiness when the program is launched.

AN INNOVATIVE PLANNING APPROACH TO DEVELOPING A NOVEL NP RESIDENCY PROGRAM

An Equitable Admission Process Results in Diverse NP Residents

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Purposes/Aims: The purpose of this presentation is to describe how an admissions work group was used in the planning and pilot year of designing and launching a HRSA funded, primary care focused nurse practitioner (NP) residency program.

Rationale/Background: Research has shown that novice NPs can take up to a year to feel confident in managing their patient panel. NP residency programs are usually one year long and provide additional support including guidance, an incremental patient panel, and educational opportunities. Recruiting NP residents for a NP residency program can be challenging, particularly when based at a SON but whose NP residents' practice at academic center clinics and FQHCs that are not affiliated to the SON. Partner organizations can benefit from participating in an NP residency program as was found in a survey of postgraduate NP residency programs in the United States. This study showed that 90% of program directors indicated that NP recruitment and retention were benefits to organizations implementing NP residency programs. All partners need to understand the recruitment and selection process for the NP residents and feel confident that it will result in the hiring of the best qualified candidates.

Methods/Approach: At the beginning of the planning year, the NP residency program worked with its advisory council to recruit representatives from each of the organizations to be part of the admissions committee work group. Having all partners involved in designing the admissions process was paramount since the NP residency program decides where each NP resident is placed, not the clinical site. The admissions committee designed a multi-level process to select 10 NPs for the primary care residency. The process consisted of a comprehensive review that included different aspects of the application, candidate background, academic and personal accomplishments, and demonstrated interest in primary care of the underserved. In addition, candidates participated in multiple mini-interviews with 7 stations evaluating compassion, ethics, communication, clinical judgement, leadership, patient-centered care, and teamwork. Candidates also completed a computer-based branching scenario and a group activity. Twenty reviewers and interviewers participated in an orientation and received implicit bias training prior to the interview and review processes.

Findings/Outcomes: The application review, interviews, and selection process were completed six months before the start of the NP residency program. There were 64 applicants that met minimum requirements, 26 were interviewed, 8 FNPs and 2 AGNPS were accepted, and 5 were placed in a waitlist. The selected candidates were diverse in demographics, experiences, and background. All partners were pleased with the selection process.

Conclusions: Having an admissions committee workgroup design a process that has input from all partners can result in the selection of a diverse group of NP residents. Partnering in the design of the admissions process can help solidify the partnership, investment, and commitment of all partnering organizations.

Funding: Health Resources and Services Administration, grant # T14HP33203

Integrating Community Partners to Create Curricula in an NP Residency Program

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Purposes/Aims: The purpose of this presentation is to describe how an education and curriculum work group contributed to developing a new HRSA grant-funded, primary care nurse practitioner (NP) residency program that engaged interprofessional partnerships between community clinics, academic clinics, and a School of Nursing (SON).
Rationale/Background: While residency programs for medical doctors began in the late 1800's, residency programs for other professions are fairly new. Starting a new residency program requires building a robust infrastructure including the development of a didactic and experiential curriculum that enhances the residents existing knowledge and skills. This includes the incorporation of clinical simulation training, which has been shown to improve communication and skill acquisition.
Description of the Undertaking: The SON based NP residency program developed an organizational structure, consisting of four workgroups and an advisory council, to help develop and implement the new program. Three of these groups were focused on curriculum development. The curriculum workgroup was focused on the overarching didactic curriculum while the simulation workgroup focused specifically on developing clinical simulations on topics identified by the curriculum workgroup. The clinical rotations workgroup identified education priorities for the resident's clinical experience. Workgroup members were interprofessional and included community clinicians and academic faculty educators from nursing, medicine and pharmacy who brought their unique expertise to the group. To bring together the diverse perspectives of the group, an iterative process was undertaken. Over the course of 10-months, workgroup members brainstormed educational topics relevant to newly graduated NP's and then participated in a series of in-person meetings with members of all three workgroups. During these meetings, topics were refined, prioritized and educational modalities were identified for each. These were used to create the final educational curriculum.
Assessment of Findings/Outcomes Achieved: The NP residency welcomed 10 NP residents from across the country and launched on July 1st, 2020. The curriculum designed by the simulation and curriculum workgroup was implemented and included monthly didactic and hands-on training. To evaluate the effectiveness of the education, evaluations were completed by the residents after each education session. A quarterly self-assessment was completed to gauge comfort with clinical topics. While it is difficult to tease out the impact of didactic sessions from clinical experiences, there was a statistically significant increase in self-reported competency over the course of the year on topics including treating substance use disorder, ordering and interpreting radiological tests, accessing community resources and utilization management; all topics in which the residents received didactic learning.
Conclusions: The model of crowdsourcing education topics from a large, interprofessional group allowed for a broad range of perspectives and a robust curriculum and is replicable. Further research could be done to evaluate the impact of the education curriculum on clinical skills learning.

Funding: Health Resources and Services Administration, grant # T14HP33203

AN INNOVATIVE PLANNING APPROACH TO DEVELOPING A NOVEL NP RESIDENCY PROGRAM

Creating NP Residency Primary Care Clinical Rotations in FQHCs

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Purposes/Aims: The purpose of this presentation is to describe the utilization of a clinical rotations work group in starting a new HRSA grant-funded, primary care nurse practitioner (NP) residency program that engaged interprofessional partnerships between community clinics, academic clinics, and a School of Nursing (SON).

Rationale/Background: Over the last twenty years, the value of residency programs beyond medical programs has been recognized in many health professions including pharmacy, nursing and, more recently, nurse practitioners. An essential part of developing a primary care NP residency program is to ensure that the NPs have a primary care practice site that can provide the necessary mentorship. For this HRSA funded program, the goal was for the NP Residents to work in underserved and/or rural environments, which meant the SON needed to partner with rural and underserved sites. Anticipating the challenge of coordinating similar experiences across multiple sites was the impetus for initiating the clinical rotation workgroup, where ALL sites could collaborate to design yearlong rotation schedules and practice templates that all sites could follow.

Description, Methods, Approach: The SON Grant Management staff worked with the leadership of interested clinics to identify at least one clinical preceptor to participate in the Clinical Rotation workgroup. The workgroup met monthly for 90 minutes throughout year 1 and the first 6 months of year 2. The workgroup placed a strong focus upon accelerating broad skill development, clinical proficiency, resident confidence and competence, and practice management skills within a rural and/or diverse medically underserved clinical population.

Outcomes: A 15-member Clinical Rotations workgroup was formed with clinical preceptors and interprofessional healthcare stakeholders. Criteria for site eligibility, including preceptor interest, facility capacity for resident support, clinic location and population served were developed as well as desirable specialty rotations such a dermatology, women's health, wound care, and pain management that could be integrated throughout the residency. A template for clinical hours was developed to standardize resident schedules across clinics. Clear expectations for resident panel development, implementation of a step-up plan for patient visit time and numbers and expected level of supervision were developed into a resident onboarding template and provided to preceptors during preceptor training. Adoption of an NP residency online platform facilitated scheduling, recording of duty hours, patient visit types and educational and clinical resources.

Quarterly resident self-assessments facilitated preceptor's ability to guide clinical experiences. Initial weekly resident assignments reviewed by the residency program director included written reflections of their clinical experiences, which were generally very positive. End of program evaluations by residents and preceptors provided specific program feedback and recommendations. Although trajectories were somewhat different, NP residents completed the residency and had significant growth in confidence and competence.

Conclusions: Use of an interprofessional Clinical Rotations workgroup successfully recommended primary and specialty practice rotation schedules, a step-up visit time schedule for residents, and templates for preceptor and clinic requirements. The group provided interval responses to identified barriers. Evaluations by both Residents and preceptors indicate a positive outcome with Residents indicating increased skills, confidence, and efficiency in their clinical practice.

Funding: Funded by Health Resources and Services Administration, grant # T14HP33203

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

Building Primary Care Nursing Capacity through Education

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Purpose: Well-trained primary and ambulatory care nurses (PC-RN) are essential for team-based primary care that improves health outcomes and patient satisfaction while reducing costs and alleviating provider burnout. Expanding PC-RN capacity and competencies are called for in the "Future of Nursing 2020-2030" and AACN "The Essentials" reports. In this symposium we discuss how our nursing programs prepared nursing students and working PC-RNs to address nursing transformation and meet the needs of the populations we serve.

Background: The Health Resources and Services Agency announced funding for the Nurse Education, Practice, Quality and Retention Primary Care (NEPQR-PC) Program in 2018 to support training primary and ambulatory care nurses (PC-RN) to work at the full scope of their license. The four Western States NEPQR-PC programs participating in this symposium partnered with clinical organizations to provide training and education for nursing students and PC RNs that emphasized the unique health care needs of rural and underserved communities.

Undertaking: Our NEPQR-PC programs have shared goals to integrate primary care content into the curriculum, identify and prepare PC-RN preceptors, and provide students with longitudinal primary and ambulatory care clinical placements. Each of us have tailored our programs to build upon our individual strengths and to address the unique needs of the primary care clinics in our geographical areas. We have evaluated the success of our programs through shared national measures of student, preceptor and patient satisfaction, as well as individual success measures. In this symposium each program describes the programs developed, program outcomes, and challenges faced and addressed.

Outcomes Achieved: Each of our NEPQR programs have been successful in integrating primary/ambulatory care into our programs in different ways. Curricular enhancements include digital badges incorporated into courses, supplemental concept-based learning, simulation experiences and mentoring support for Native American students. Primary care preceptor training included workshops and regularly scheduled webinars. Each program has developed webinars, online training modules or workshops to provide primary and ambulatory care nurses with education. Barriers to primary care transformation, such as lack of faculty and clinic RNs to model primary care transformation, have been greatly reduced and each program reports growing interest in both curricular and continuing education programs.

Conclusions: In the past three years, our NEPQR programs have elevated the role of primary and ambulatory care nursing within undergraduate nursing programs and clinical practice. The nursing content developed serve as exemplars of curriculum needed to meet the new Baccalaureate essentials. Preceptor training materials are preparing primary care nurses to meet the increased demand for primary and ambulatory care clinical experiences for students. Our programs have increased commitment from faculty, students, and primary care clinics to focus on educating the next generation of nursing professionals about the essential role of primary and ambulatory care in healthcare transformation.

Funding: HRSA Nurse Education, Practice, Quality and Retention Program

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

Enhancing Primary Care Nursing in Rural and Underserved Areas of Utah

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Purpose: The purpose of the University of Utah Nurse Education, Practice, Quality and Retention (NEPQR) Program is to: 1) Prepare baccalaureate nursing students to work in primary care through curricular enhancements and longitudinal clinical placements; and 2) Enhance working primary care registered nurse (RN) competencies in precepting students and leading interprofessional clinic teams.

Background: Utah has vast geographic areas designated as primary care health professional shortage areas, especially in urban underserved and sparsely populated rural areas. RNs can expand primary care capacity; however, baccalaureate nursing programs traditionally have not prepared students for enhanced roles in primary care. The NEPQR Program was developed to address this need.

Undertaking: We developed 13 online modules that introduce baccalaureate students to the primary care nursing role. A NEPQR Scholar program was developed to provide scholarships, mentoring and longitudinal clinical placements for students interested in primary care. Primary/ambulatory clinics with RNs working at the full scope of their license were identified as clinical partners and provided preceptor training and resources to further develop the nurse role. Program evaluation included faculty, student, and preceptor satisfaction.

Outcomes Achieved: The 13 online modules were fully integrated into the baccalaureate programs and 3305 modules have been completed by students. Satisfaction survey results indicate the modules meet student education needs and are somewhat to not too difficult. Identifying clinics in rural and underserved communities with RNs prepared and willing to precept students was an initial challenge. RN preceptors from over 15 clinics have been trained through online programs, webinars and ongoing mentoring by faculty. To date, 16 RNs have precepted 22 NEPQR Scholars. On a 1-7 scale, preceptors strongly agree to agree that the precepting increases their own knowledge base (1.67 ± 1.15) and organizational skills (1.83 ± 1.27). All 22 students have completed 150-hour longitudinal clinical placements in clinics serving the medically underserved; 10 (45%) in rural communities. Preceptors have rated students as satisfactory in outcomes and professional abilities. Students agree that there was meaningful learning and that the clinics were good learning environments; the majority state they want to work in primary care (79%) and in rural or medically underserved communities (86%).

We faced several challenges to building primary care nursing capacity in our state. Initially, we struggled to recruit NEPQR Scholars because of lack of awareness about primary care nursing. Although the number of students joining the NEPQR Scholars program has increased, many are not able to travel to a rural community for their longitudinal clinical placement. We continue to build our primary care clinic partnerships through networking and continuing education to ensure that there are trained preceptors for the increased student interest in primary care.

Conclusions: We have successfully developed curricular content that introduces students to primary care nursing roles and trained primary care RNs to precept students. Our program aligns with the domains for nursing outlined in the *AACN Core Competences for Professional Nursing Education* and prepares students and primary care nurses to provide complex, person-centered quality care across the lifespan and outside hospitals.

Funding: This program is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UK1HP31735 as part of an award totaling 2.8 million dollars with 0% financed with non-governmental sources. The content of this program do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government.

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

Oregon NEPQR: The Oregon Primary Care Transformation (OPACT) Program

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Purpose: The purpose of the Oregon Primary Care Transformation (OPACT) program is to expand the registered nurse (RN) workforce in rural and underserved areas by educating nursing students and nurses about the role of RNs as essential primary care team members.
Background: High quality primary care is the bedrock of equitable healthcare service delivery. RNs practicing at the top of their license are well-situated to lead team-based, health promotion, disease prevention, and care coordination efforts. Yet, most pre-licensure nursing students are rarely exposed to the focused knowledge and skills required in primary care settings and nurses working in primary care settings receive limited primary care nursing education (Shaffer et al., 2018; Wojnar & Whelan, 2017). The OPACT program is designed to address the primary care nursing knowledge/practice gap and to help expand the primary care workforce in Oregon.
Undertaking: OPACT has 4 strategic objectives, to: 1) support undergraduate primary care nursing education through curriculum modification, 2) develop primary care practice partnerships in rural and underserved communities, 3) recruit undergraduate nursing students for primary care clinical placements, and 4) collaborate with practice partners to support primary care education for practicing RNs. Pre-licensure nursing students enrolled in identified courses (Population Health, Nursing Leadership, and Integrated Practicum) are recruited, interviewed, and selected for OPACT participation. OPACT students complete 12-16 hours of supplemental concept based learning activities (CBLAs) and 150 hours of primary care clinical learning each term. RN preceptors, selected on the basis of interest and availability, provide OPACT students with a situated learning experience. Preceptors are eligible to participate in monthly virtual events focused on best practices in primary care. Evaluation of outcomes includes quantitative and qualitative assessment.
Outcomes: Twelve primary care focused CBLA modules reflecting professional (AAACN) practice standards and curriculum competencies were developed. To date, 75 pre-licensure nursing students have participated in OPACT with 26 students completing longitudinal (≥2 terms) placements. Collectively, OPACT students have completed 1,625 hours of primary care education (CBLAs) and 16,500 clinical hours in primary care. Pooled survey data is statistically significant ($p<.001$) for self-reported increased student knowledge, skill, ability to actualize content, and manage patients in the primary care setting. Overall students rate their OPACT experience highly and report an increased interest in primary care nursing. Six OPACT students have entered primary care practice after graduation. New practice partnerships include 27 primary care clinics and 37 RN preceptors. Most (90%) preceptors rate their satisfaction with OPACT highly. Pre/posttest survey data from the monthly virtual "Bright Spots" events suggest preceptors find the events beneficial. Challenges faced include developing and deploying a program simultaneously, variations in practice partner models of care, and the availability of RN preceptors. The COVID-19 pandemic has reduced access to practice sites and preceptors, disrupted planned events, and thrust change at every level of learning.
Conclusions: The transformation of nursing practice to support RNs as valued primary care team members and leaders requires the redesign of undergraduate nursing education, readiness of clinical practice partners, and co-creation of learning centered on best practices.

Funding: Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under 1UK1HP31728-01-00, Nursing Education, Practice, Quality, and Retention

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

Strengthening the Ambulatory Care Nursing Workforce Along the Educational Continuum

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Purpose: To create and leverage innovative academic-practice partnerships with two community organizations to recruit and train nursing students and practicing registered nurses to practice at the full scope of their license in community-based ambulatory care teams within rural and medically underserved areas (R/MU).

Background: The Future of Nursing 2020-2030 has highlighted the critical role of nursing in eliminating disparities and promoting health equity. Further, as care is increasingly delivered in outpatient settings, there is a vast need to ensure that nurses have adequate training to deliver high-quality, safe, and team-based care in R/MU ambulatory settings. However, research has demonstrated that nurses are often unprepared for ambulatory care nursing, particularly the delivery of team-based care in those settings.

Undertaking: The University of Washington (UW), Kaiser-Permanente Washington (KP-WA), and Western Washington Area Health Education Center (WW-AHEC) partnered to: 1) educate and train prelicensure nursing students in ambulatory care; 2) strengthen preceptor training through integration of learning pedagogy and principles of team-based care; and, 3) enhance continuing education (CE) programs for ambulatory care nurses to practice at full-scope. To accomplish this, our team created both required and elective didactic and clinical training opportunities including, transportable content modules, simulations, and monthly standardized CE webinars for ambulatory nurses in the Puget Sound. Activities were intentionally created with long-term sustainability as a major goal. Evaluation included both pre-and post-experience quantitative measures, qualitative feedback from learners, and surveys of preceptors and practicing nurses.

Outcomes Achieved: Due to COVID-19, evaluation responses varied across academic quarters. Self-report data from the Self-Efficacy and Performance in Self-Management Support (SEPSS) tool indicate statistically significant improvement in learner self-efficacy, pre-and post-didactic experiences for 4 cohorts of learners (N=64, 63, 15, & 61, respectively). Data also indicate that nursing skills related to patient education, communication, COVID-19 management, and resource referrals were frequently performed, increasing independence over time. Similarly, knowledge about team-based care, patient education, and advocacy increased over time. While not significant, mean scores of perceived ability to manage and teach students in ambulatory care nursing among preceptors (N=40) increased. Nurse participation in monthly CE sessions was consistently high, suggesting that the sessions were perceived as relevant and meaningful.

Our program has provided important lessons learned for future efforts. Up-front time to build trust and nurture the academic-practice partnership is critical for authentic development of future ambulatory nurses, and identification of meaningful outcomes. Moreover, a clear understanding of roles and responsibilities is necessary for sustainability. Last, the desire for evaluation data must be weighed against survey burden, particularly in climates like COVID-19, where learners and nurses may be overwhelmed.

Conclusions: Academic-practice partnerships are critical to support the education and training of ambulatory care nurses in R/MU areas. Collaborating on the development and implementation of content and training opportunities allowed for relevant experiences that increased knowledge and skills in ambulatory care competencies among both prelicensure and practicing nurses. Future work will identify best practices for curricular changes specific to ambulatory care, meaningful evaluation approaches, and sustaining academic-practice partnerships.

Funding: This presentation is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $2,798,890 with 0 percentage financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HSS or the U.S. Government

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

Elevating Primary Care in Colorado through Collaborative Partnerships

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Purpose: The project purpose is to change the prevailing system of healthcare delivery by increasing the number and scope of RN’s working in primary care, with a focus on underserved communities in both rural and urban areas of Colorado.

Background: Valley Wide Family Health and five partner organizations were awarded a HRSA Nursing Education, Practice, Quality and Retention (NEPQR) grant. The collaborative is composed of three schools of nursing, two Federally Qualified Health Centers (FQHC’s) and the state nursing workforce center, Colorado Center for Nursing Excellence. The program’s multi-part design was developed in concert by the Collaborative members.

Goals include:

1. Provide a structured system of academic, coaching, and financial support for 60 nursing students interested in primary care.
2. Develop and support primary care clinical placements for students.
3. Develop and provide continuing education for at least 60 employed RNs and 20 preceptors.
4. Enhance didactic curricula in three schools of nursing to integrate primary care, population health, and interprofessional education.
5. Provide an annual “Systems Change Summit” for FQHC’s to provide leadership, policies, and practices necessary to implement and support expanded RN roles.

Undertaking: The academic partners reviewed the current curriculum and identified areas in each nursing course where AAACN primary care concepts and competencies could be added to existing classes and then enhanced their respective curriculum.

Three unique Professional Development courses were created to educate nurses in primary care on precepting skills, leadership development and nurse led team-based care. Affiliation agreements were established between colleges of nursing and primary care clinical sites.

Outcomes Achieved: Sixty-one students completed 150 hours of clinical experiences in a primary care setting. To date 100% of students have passed NCLEX, two are working in primary care and 44% of students reported they have intentions of working in primary care in the future. Three unique professional development workshops were created. A 5-hour preceptor training was offered twice for a total of 35 participants. A four-day leadership development course for nurses in primary care was offered four times with 102 participants and a “Systems Change” two-day workshop was offered twice for 77 participants. Overall, the nursing schools showed a 14% increase in hours of primary care content between baseline and year two and an 8% increase between year two and year three.

Challenges Faced

The COVID-19 pandemic created challenges for students to complete primary care placements and in-person professional development workshops were converted to virtual formats. Aggregating curriculum enhancements proved challenging as each of the nursing schools is accredited by different entities and has different clock and credit hour definitions and program outlines.

Conclusions: The curriculum enhancements will continue after the grant has ended and impacts all nursing students in the three partner schools. System changes in partner clinics and clinics that sent nurses for professional development will continue to provide environments for nurses to work at the top of their scope long after the grant has ended. The clinic/academic partnerships created are sustainable, allowing future students to have primary care clinical experiences.

Funding: HRSA NEPQR Uk1HP31720

BUILDING PRIMARY CARE NURSING CAPACITY: THE NURSE, EDUCATION, PRACTICE, QUALITY AND RETENTION PROGRAM

The Montana Nurse, Education, Practice, Quality and Retention Program

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Purpose: Process evaluation of the MT NEPQR Partnership provides unique insights into the kinds of supplemental program processes that transform students to better meet the full scope of their license in community-based primary care settings and that will eventually increase access to high-performance primary care for American Indian (AI), rural, and other underserved communities. The purpose of the Montana NEPQR Partnership is to design a system to recruit and educate nursing students who will have the experience of interprofessional clinical practice.

Background: More than 75% of the population in Montana live in areas classified as rural or frontier. AI are the largest minority population in Montana. The most recent estimates indicate that there are approximately 66,000 AI living in the state; representing 6.6% of the total population. The people of Montana experience high rates of chronic medical conditions and behavioral health issues in an environment with limited health care access, vast distances, and provider shortages. Less than 15% of registered nurses work in ambulatory care and only 3% of Montana nurses are American Indian; a persistent problem for providing culturally competent care and meeting the health care needs in the state. To provide integrated, holistic and convenient care in the rural, ambulatory care setting, nursing students, their faculty and preceptors need to deliver nursing education in the same manner. Expanding undergraduate clinical education more fully into rural primary care settings provides students with the connections and experiences they need to transition into providing care in these communities after graduation.

Undertaking: The Montana State University College of Nursing partnered with the Montana Area Health Education Center (AHEC), the Caring for Our Own Program (CO-OP) and tribal and statewide partners to: 1) recruit primary care-oriented undergraduate nursing students into the rural, primary care track (RPCT), 2) provide RPCT students with clinical education in community-based primary care settings and interprofessional teams, 3) deliver continuing professional development to preceptors, mentors and nursing faculty, and 4) enhance didactic and clinical training curricula to reflect priority topics in primary care including chronic disease prevention and control, trauma-informed care, interprofessional education, mental health and substance abuse. This evaluation study analyzes the mobile outreach clinical experience, essential features, and student self-efficacy through process measures as well as outcome measures.

Outcomes Achieved: MT NEPQR rotated 574 students, including 74 AI BSNs in 10 primary care clinical sites over the first three years of the project. AI students were provided with culturally relevant academic support and social connection including a nursing mentor and a retention specialist.

Conclusions: Montana State University, a land grant institution in the Northwest, is contributing to the transformation of primary care in rural communities. Rethinking approaches to classroom and clinical education across the five-campus system has helped to increase the number and competencies of nurses electing to practice in primary care settings after graduation. MT NEPQR has demonstrated its success by providing the faculty, students and preceptors the diverse skills and experiences needed to meet growing primary care demands in rural and underserved areas of Montana.

Funding: Nursing Education, Practice, Quality, and Retention – Registered Nurses in Primary Care (NEPQR-RNPC) Program, UK1HP31719, HRSA 18-012

EXPLORING "EQUITY" IN HEALTHCARE ACCESS AND DELIVERY AMONG LATINOS/X: ARE WE THERE YET?

Overview: Exploring "Equity" in Healthcare Access and Delivery Among Latinos/x: Are We There Yet?

Adrienne Martinez-Hollingsworth*, PhD, MSN, RN, PHN, College of Nursing, Samuel Merritt University, Oakland, CA;* ***Mary Nies****, PhD, College of Health, Idaho State University, Pocatello, ID*

Purpose: The aim of this symposium is to highlight persistent challenges to health equity among Latinos/x in the United States (US) and abroad via four recent projects/studies by nurses in the WIN Latino/x Special Interest Group. In this symposium, we consider current barriers to equity across this heterogenous, resilient group and present compelling data that seeks to answer the question "are we there yet?" in terms of achieving health equity in the US and throughout the Latin American diaspora.

Background: At ~5.7 million people, US Latinos represent the largest ethnic/racial minority, spanning several countries of origin, cultural beliefs, and health practices. Latinos/x shoulder various chronic illness, access and health education disparities that reflect a complicated history of disenfranchisement at the individual level and divestment at the community level. This constellation of factors precludes achieving health equity without a conscious, explicit awareness of both the history and future of these challenges as well as the recognition of novel, innovative strategies to improve health among Latinos/x in the US and abroad.

Methods: The first study, a randomized control trial (RCT), explores the Shared Medical Appointment (SMA) Model to increase access to Type 2 diabetes mellitus (T2DM) care in rural Chiapas, Mexico as a potential solution for rural provider shortage areas in Latin America. Next, a secondary data analysis uses survey and biomarker data from Latinx mothers, and children (n=432) investigating associations between negative social determinates of health and maternal/child stress. In the third, we learn about Community Health Worker (CHW) experiences building trust with patients in predominantly Latino/x communities. Finally, we learn about access gaps and inequity of services/benefits for deported non-US citizen veterans living in Mexico via case studies illustrating veterans' differential experiences accessing care on each side of the US/Mexico border.

Findings: The Shared Medical Appointment RCT found no statistically significant differences in baseline HgbA1C between the intervention and control (t-.024, p=.98 (df 122), indicating this approach may increase access in provider shortage areas. In the secondary analysis of social needs and stress, investigators found that most (90%) of mothers had a least one current social need, and 1/3 had more than five. Also, high maternal perceived stress predicted higher odds of child emotional dysfunction (OR = 2.15; 95% CI [1.14, 4.04]; p = 0.01). Next, the qualitative study of Community Health Workers found that trust-building included the need to address immediate negative social determinants of health before a relationship can be established. Finally, the case studies exploring barriers to health equity among deported veterans found gaps that go beyond clinical services, but had the potential for impacting health, including differential job opportunities, and housing services and benefits.

Conclusion: Across these four presentations we see persistent challenges to health equity among US Latinos/x and how this can inform health-seeking experiences beyond US borders. By recognizing opportunities to add to the scientific literature surrounding Latinos/x health, nurse researchers have the potential to move the needle on achieving true equity for this population.

EXPLORING "EQUITY" IN HEALTHCARE ACCESS AND DELIVERY AMONG LATINOS/X: ARE WE THERE YET?

Shared Medical Appointments in Chiapas, Mexico for People Living with Type 2 Diabetes

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Purpose: To explore the use of a Shared Medical Appointment (SMA) Model to increase access to Type 2 diabetes mellitus (T2DM) care in rural Chiapas, Mexico.

Background: Worldwide 415 million people are living with T2D and 80% of those reside in middle and low -income countries. National surveillance in Mexico reports inequity in diabetes care with only 15% of people with diagnosed T2DM reporting a Hemoglobin A1C (HgbA1C) test in the past 3 months (a critical aspect of long-term prevention of T2DM complications, including retinopathy and decreased kidney function resulting in the need for dialysis). In the United States (US), the Shared Medical Appointment Model has demonstrated some successes in improving access to T2DM care among low-income Latinos/x and is a potential solution to reduced access in isolated or rural provider shortage areas in Latin America. This study represents the first effort to test this model for use in global health, specifically, a Spanish-speaking, rural population in Mexico.

Methods: A Shared Medical Appointment Model was implemented to increase access to T2DM care by Compañeros en Salud (CES), an NGO in Chiapas, Mexico, from 2017 to 2020 in eight rural community clinics. Shared Medical Appointments entail comprehensive medical care in addition to diabetes management education and support in the context of peer support. A randomized control trial evaluated the efficacy of this model compared to usual primary care. Participants were followed for 6 months. HgbA1C (a 3-month average measure of blood sugar) was the primary outcome.

Results: A total of 149 eligible participants were randomized to intervention (n=73) or control group (n=51). A comparison of change from baseline to 6 months in HgbA1C between the study arms was conducted using linear regression. Regression analysis included group (Intervention, versus control) as the independent variable, controlling for baseline HgbA1C values. There were no statistically significant differences in baseline HgbA1C values between intervention and control groups (t-.4, p=.98 (df 122). Regression analysis revealed there were not statistically significant differences between groups in the reductions in A1C at 6 months (*b*= --.049, t (115) =-.58, p=.57, R^2 =.17, F(2, 115)=11.65, p=.00).

Implications for Translation to Practice/Further Research/Policy: The Shared Medical Appointment model was successfully implemented in 8 rural remote clinics with good participation levels. Additionally, the model proved to be equally effective in reducing HgbA1C levels at 6 months with the added value of increasing access, patient education and empowerment in diabetes self-management. These findings suggest this approach may allow for increased access to T2DM care in health provider shortage areas without a need for increased resources.

EXPLORING "EQUITY" IN HEALTHCARE ACCESS AND DELIVERY AMONG LATINOS/X: ARE WE THERE YET?

Stress in Latinx Children and Mothers Who Experience Household Social Need

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Purpose: The purpose of this study was to investigate the relationships between household social needs, maternal stress, and child stress among low income Latinx families.
Background: The prevalence of emotional disorders such as anxiety or depression in children in the U.S. is steadily increasing. Latinx youth are particularly vulnerable to poor emotional health outcomes, as barriers to healthcare access or cultural stigma contribute to lower diagnosis and treatment rates than youth from white, non-Latinx households. Low household income is associated with higher rates of child emotional dysfunction; however, little is known about how the ability to meet basic social needs, like housing and food, impacts emotional health in Latinx children from low-income families. There is also growing evidence of the physiologic effects of chronic stress related to income poverty, but there are gaps in defining the relationship between social needs and physiologic stress, particularly in Latinx children.
Methods: In this study we performed secondary analyses of enrollment data from 432 Latinx children and mothers collected in a previous randomized trial. Measures included a sociodemographic questionnaire that included a report of up to 18 individual current household social needs; the Perceived Stress Scale (PSS-4), a validated measure of maternal perceived stress; and the Pediatric Quality of Life survey Emotional Function scale (PedsQL-EF), a validated measure of child emotional function. In addition, we used hair cortisol concentration (HCC) as physiologic measure of maternal or child stress. Data analysis included binomial and multinomial logistic regression models to test if household social needs or maternal stress predicted child emotional dysfunction or stress, controlling for other sociodemographic factors.
Results: About 90% of mothers reported at least one current social need in their household, and well over one-third reported having more than five social needs. Over 40% of children in the sample were reported to have emotional dysfunction, and high maternal perceived stress predicted higher odds of child emotional dysfunction (OR = 2.15; 95% CI [1.14, 4.04]; $p = 0.01$). High maternal HCC showed a significant positive association with high child HCC (RR = 10.60; 95% CI [4.20, 26.74]; $p < 0.01$). Most individual household social needs, as well as the summative level of household social need, were not independently associated with child emotional dysfunction or child HCC.
Implications: Our findings begin to define a framework for understanding emotional health and stress when caring for Latinx children and mothers from low-income households. We find that household social needs are high, calling attention to the need for policies that expand access to public assistance programs and remove barriers to access related to immigration status. We also provide further evidence that stress in Latinx mothers increases the risk for child emotional dysfunction and stress. Taken together, our work supports the need for healthcare settings that serve Latinx families to include integrated caregiver and child behavioral health services, as well as social risk screening and interventions, for the improvement of emotional health outcomes.

Funding: Gordon and Betty Moore Foundation: GBMF4294; Lisa and John Pritzker Family Fund; JPB Foundation of New York

EXPLORING "EQUITY" IN HEALTHCARE ACCESS AND DELIVERY AMONG LATINOS/X: ARE WE THERE YET?

Building Trust with Women of Color at-Risk for Maternal Child Health Disparities

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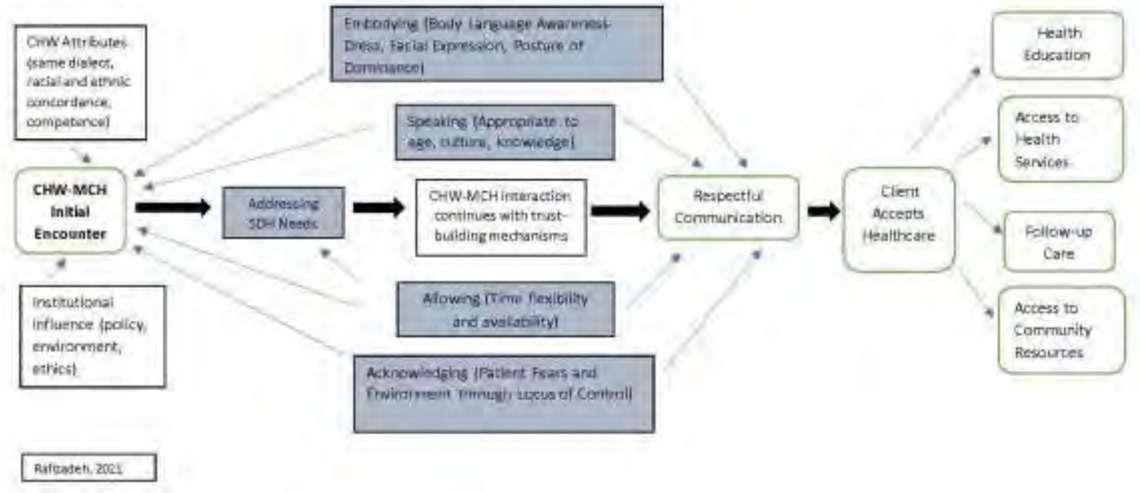
Purpose: This paper uses the grounded theory methodology to understand how CHWs build trust with low-income women of color with a historical distrust of the health care system and are at-risk for maternal child health (MCH) disparities.
Background: Distrust of the health care system among women of color is common and creates potentials barriers to healthcare access. The cause of this distrust has roots in both institutional racism and personal experience, with growing evidence that Hispanic, African American, and Native American women are up to 3 times more likely to experience perceived discrimination than non-Hispanic White women. Chronic experiences of racism during pregnancy have been associated with preterm birth, low birth weight, and reluctance to seek prenatal care. African American Hispanic, and African American women being twice as likely to experience preterm births (PTB) and deliver low birth weight (LBW) infants than non-Hispanic White women and Native American women are 20% more likely to deliver PTB. Community Health Workers (CHWs) are shown to effectively promote access to community-based health care by reaching out to marginal underserved groups. However, less is known about CHW attributes in interpersonal communication, including how CHWs build trusting relationships with the patients they serve and facilitate access to health care.
Method: Charmaz's grounded theory method was applied using interviews and focus groups of CHWs who worked in community-based and hospital-based programs that served low-income women and families located in California, Oregon, Illinois, Texas, South Carolina, New York, and Maine.
Results: Thirty-two CHWs participated, with 95% of Latinx and African American ethnicity. They served women from Latinx, African American, and Migrant communities. CHWs were able to build and sustain trust through these strategies: 1) addressing immediate social determinants of health needs; 2) embodying mannerisms and dress; 3) speaking appropriately to the client's age, culture, and knowledge; 4) easing the client's fears through locus of control, and 5) allowing for time flexibility. CHWs were able to proceed with their interventions as a result of establishing trust. These findings are described in a theoretical framework of the CHW-MCH communication trust-building mechanisms that begins with the initial encounter continuing through intervention.
Implications for Translation to Practice/Further Research/Policy: Further research exploring aspects of building trust through the women's perspectives is also needed to confirm the CHW perspectives. The trust-building strategies we identified can be applied in practice and may extend to other settings with the potential to support trainings with other clinicians and staff who work with low-income women of color at risk for MCH disparities.

Trust-Building Mechanisms during CHW-MCH Initial Encounter



EXPLORING "EQUITY" IN HEALTHCARE ACCESS AND DELIVERY AMONG LATINOS/X: ARE WE THERE YET?

Barriers to Health Equity Among Deported Veterans in Mexico: Comparative Case Studies

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Purposes: 1) To perform an analysis of barriers to health equity among deported non-US citizen veterans, currently in Mexico; 2) to review available information resulting in the deportation of veterans and access implications; and, 3) to create standardized patients exemplifying differential experiences across veteran populations based on citizenship status as a teaching tool.

Background: Information on utilization trends among post-Gulf War and post 9/11 discharged service members in the United States (US) indicate substantial healthcare usage. Extrapolating from these data, we anticipate significant unmet health care needs among thousands of deported veterans who lack access to Veterans Administration (VA) facilities. Deported veterans in Mexico face additional barriers to service use that can impact social determinants of health, including access to housing, education services, and job training/employment assistance available to their US counterparts through the VA.

Brief Description of the Undertaking: Approach - This approach builds off the Case Method of teaching and learning that encourages students to interact with real-world situations and "actively grapple" with complex human conditions by creating human exemplars. **Methods -** Search engines EBSCO host, ProQuest, PubMed, CINHaL were used to identify laws, regulations, policies, peer-reviewed manuscripts, and congressional transcripts published from 2001 to 2021, using the terms "deported veterans, deportation, military, non-US citizen, Mexico, healthcare, VA, VHA, benefits, veterans' health, reintegration, and transition." Additional searches of the gray literature were done using google with the same keywords, resulting in recognition of policies, online media, laws, congressional legislation, and organizational/advocacy group documentation from this same period. These data supported the creation of the standardized patients that were composite figures representing the literature and reflecting differential experiences based on whether the veteran was 1) living in the US or 2) deported and living in Mexico. These case studies examine the gaps in access to care, job opportunities and training, education, and housing.

Assessment of Findings: The case studies are an effective method for demonstrating inequities among veterans in the US and deported non-US citizen veterans. The practices that lead to the deportation of veterans are well documented in media, within advocacy organizations, and congressional reports. The physical and mental health of the veterans is cited in reports as a significant concern. However, with documentation of experiences of deported veterans in many arenas, research remains limited. The US Immigration and Customs Enforcement practices of deporting veterans, to primarily Mexico, a country ill-equipped to provide adequate health services, education, job training, and housing for this population, continues. These actions have led to the loss of social and family networks, inability to navigate foreign health systems, loss of identity, and significant loss of earned benefits with a multi-generational impact on the families of deported veterans.

Conclusion: The holistic impact of deporting veterans to Mexico remains unexplored. This gap has resulted in a knowledge deficit and a lack of advocacy on the stoppage of veteran deportation, the importance of repatriation of veterans, and reintegration into the US community with the appropriate resources and support systems.

EXPLORING THE IMPACT OF A HEALTHCARE SYSTEM'S 'SCALING UP PLAN' TO EFFECTIVELY IMPLEMENT, EVALUATE AND SUSTAIN PEER-TO-PEER FEEDBACK TO SUPPORT NURSE AUTONOMY AND PATIENT SAFETY

Overview: Exploring the Impact of a Healthcare System's 'Scaling up Plan'

***Peggy Kalowes**, PhD, RN, CNS, FAHA, Nursing Consulting Partners (NCP), Long Beach, CA*

This symposium will engage clinicians interactively about the challenges, lessons learned and successes of a national healthcare (HC) system's 'Scaling Up Plan' to implement, evaluate and sustain nursing peer-to-peer feedback. Peer feedback (PF) is an essential factor of professional practice to help ensure the quality/safety of nursing care; and for nurses to self-regulate/promote practice accountability/safety. Yet, meaningful peer feedback is absent in most practice settings. This introduction session will provide an overview how a HC system conducted a gap analysis to determine ways to optimize a culture of safety—drawing lessons from aviation and nuclear power industries. In these cultures, every participant is expected to assess a situation, form a judgment, and provide real-time feedback. Hence, stakeholders designed a 'Scaling Up Plan' that grew into an adaptive, non-prescriptive roadmap to implement/sustain peer feedback to leverage autonomy, and patient safety.

Abstract 1 - Nurses Perception of Professional Peer-to-Peer Feedback: Relationship to Nurse Autonomy and Patient Safety This first session, authors discuss how the organization reimagined patient safety, by gathering robust, reliable evidence to serve as a driver for a 'roadmap', to design an improved peer feedback program. A cross-sectional research study was completed, using a quantitative /qualitative design, to gain baseline info of nurses' perception of peer feedback, related to accountability, autonomy, and practice changes. A second aim was to learn the association of experience, education, and certification to peer feedback constructs. The 'Conceptual Model for Successful Implementation of Peer Review served as study framework. The Peer Review Survey (PRS) was used to measure nurses' perception /confidence in peer feedback. This first session presents the quantitative findings, which will be used as part of a redesign framework for peer feedback.

Abstract 2 - Exploring Nurses Insight Related to the Opportunities and Barriers to Implementation of Peer-To-Peer Feedback: A Qualitative approach Session two, participants learn the compelling findings of qualitative data, collected as two open-ended questions on the Peer Review Survey. The aim was to gain a deeper understanding how nurses perceive the barriers and opportunities to execute a successful peer feedback program. Two researchers independently read/re-read the open-ended questions using thematic analysis. This included linear progression in analysis to include identifying/condensing meaning units, coding, and categorizing data to identify emergent themes. Four themes emerged, which will enhance our ability converge the quantitative/qualitative findings to serve as underpinnings to build a successful peer feedback program.

Abstract 3 - Futuristic Framework for Scaling Up Peer-to-Peer Feedback: Lessons Learned and Strategies for Engaging, Executing, and Evaluating Nursing Excellence/Autonomy and Patient Safety. This final session's we share our healthcare system's journey in 'Scaling Up' our Nursing Peer-to-Peer Feedback program, to gradually reinvigorate, evaluate and optimize sustainability, to improve nurse accountability/patient safety. We will discuss our challenges/lessons learned with suggestions for a futuristic platform to execute a dynamic peer feedback program. Our hope is that the evidence-based strategies shared will help any healthcare system cross the quality chasm, to create a safer environment that allows the prevention and correction of real/potential errors during patient care.

EXPLORING THE IMPACT OF A HEALTHCARE SYSTEM'S 'SCALING UP PLAN' TO EFFECTIVELY IMPLEMENT, EVALUATE AND SUSTAIN PEER-TO-PEER FEEDBACK TO SUPPORT NURSE AUTONOMY AND PATIENT SAFETY

Nurses Perception of Peer Feedback: Relationship to Nurse Autonomy/Patient Safety

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Session showcases quantitative findings on how nurses perceive peer feedback (PF). PF is essential element of nursing practice for self-regulation /accountability; giving safe/high-quality care. Poor communication skills during this process, is cited as barrier, and most common reason for errors/adverse outcomes in patient care.

Purpose: Purpose was to determine how clinical nurses perceive PF; and explore the extent they report comfort in performing PF and perceptions of quality/patient safety. Another aim was to learn the association of experience, education, and certification to PF constructs. The research question was 'what are nurses' perception of peer feedback and its relationship to nurse autonomy and patient safety/quality?

Methods: In-patient nurses at acute care hospital (*n=138*) joined a cross-sectional, descriptive study, using a web-survey, April to June 2021. Peer Review Survey measured nurses' perception of peer feedback, nurse autonomy, and just culture/patient safety. Survey used a seven-point Likert scale—1) strongly disagree to 7) strongly agree for measurement, and answers were recategorized to disagree, neutral, and agree for percentages. To examine any correlates of PF to safety/quality care, we included a sub-set of 10-questions from National Database of Nursing Quality Indicators Survey with Practice Environment Scale on quality care. Qualitative data was gathered from two open-ended questions to explicate further nursing input, to address any perceived barriers or positive strategies that strengthen the peer feedback program. Findings will be shared in session two.

Results: Descriptive, parametric, and non-parametric statistics were used. Data revealed most nurses worked at the MC >15 years (27.5%), had bachelor's degree (65.9%), and 42% held board certification. Data showed 55% of nurses had given peer feedback to a co-worker, 75% described the experience as positive, and 89% 'agreed' (*M* = 5.59, SD 1.53) and felt they can address a clinical error without retribution. Moreover, 83% felt supported to learn/grow from the error *(M* = 5.42, *SD* 1.75) and not be punished, with 75.4% satisfied (*M* = 4.47, 1.17 *SD*) on the quality of PF received. Nurses also reported (71%) they were comfortable giving clinical performance feedback to peers (*M* = 4.306, *SD* 1.37). Finally, 87% felt autonomous (have authority to make decisions and freedom to act) (*M* = 4.72, *SD* .9052). Satisfaction with quality of feedback received (*r* =.472), feeling autonomous (*r* =.488), addressing error without retribution (*r* = .485), and feeling supported to learn from an error without punishment (*r* =.598) were all significantly correlated to quality scores at *p* < .001 level. Nurses with masters/doctoral degrees reported less autonomy *(F*[2.128] = 9.343, *p* <.001) and lower quality scores (*F*[2.122]=4.290, *p* = .016) than nurses with other degrees. Yet, associate degree nurses were significantly higher on giving feedback scores (*F*[2.128] =3.241, *p* =.042). Board certified nurses reported lower quality scores (t -3.00, *p* =.003) than those without.

Implications to Practice: Initial findings revealed intermittent favorable results with a need for more robust and scaled-up PF program. Maintenance of feedback culture through consistent training/education of PF principles is recommended, including further research on association among education, certification, and perception of quality.

EXPLORING THE IMPACT OF A HEALTHCARE SYSTEM'S 'SCALING UP PLAN' TO EFFECTIVELY IMPLEMENT, EVALUATE AND SUSTAIN PEER-TO-PEER FEEDBACK TO SUPPORT NURSE AUTONOMY AND PATIENT SAFETY

Exploring Nurses Insight to Opportunities / Barriers to Implement Peer Feedback

***Peggy Kalowes**, PhD, RN, CNS, FAHA, Nursing Consulting Partners (NCP), Long Beach, CA*

Development and execution of a nurse peer feedback program to evaluate nursing practice linked to adverse events, has resulted in some changes in our health system, yet it is not fully actualized**.** **S**ession two, authors present our qualitative findings from our deep-dive into understanding nurses' perception of peer-to-peer feedback. Descriptive findings will contribute to the system's final 'Scaling Up Plan' and roadmap to build a robust/sustainable peer feedback program.

Purpose: Purpose of this qualitative inquiry was to gain a richer understanding of nurses perceived barriers to the peer feedback process; and to identify effective strategies to facilitate integration of peer-to-peer feedback into nurses' professional practice, to self-regulate, and advance the quality/safety of patient care.

Methods: A descriptive qualitative approach to further inquiry was undertaken, seeking nurses narrative self-report to two open-ended questions, at the end the Peer Review survey. Opportunistic sampling was utilized to explicate further input from nurses, giving them open space to address any perceived barriers or positive strategies that strengthen the peer feedback program. We selected this additional qualitative inquiry as findings can often illuminate the story behind the quantitative facts/numbers.

Findings: Study results validate that peer feedback is a meaningful and valuable process used by clinical nurses to support professional growth and development, along with meaningful strategies to improve the process. Two researchers independently read/re-read the open-ended questions using thematic analysis. This included linear progression in analysis to include identifying/condensing meaning units, coding, and categorizing data to identify emergent themes. Four clear themes emerged as main barriers to effective peer feedback: 1) Fear of retribution, negative attitudes; anxiety/insecurity 2) Lack of support/clarity on who conducts the peer feedback; 3) Communication, concerns with language/negativity of PF received; 4) Lack of clarity around what constitutes peer feedback/ lack of confidence in the conduct of peer feedback; need for more education. Biggest Facilitators of Peer Feedback yielded four major themes: 1) Culture of the unit/ strong authentic leadership; 2) Positive Communication; shared understanding of purpose of PF; 3) Clear understanding on who facilitates conduct of peer feedback; 4) Focus on evidence-based care; patient safety; competence of nurses on team; need more training. Nurses report peer feedback should support professional nurse accountability for improving the quality of care and may serve as an exemplar for professional practice.

Implications to Practices: Results validate the importance of implementation of a structured, formal peer review process, yet there is a need to have stronger support from managers and key organizational leaders, to achieve successful peer feedback program. The findings also identify some key barriers to address in order to have a just culture/and improve patient safety. Many nurses cited they need an environment that allows dedicated time, space and privacy, for peer-to-peer feedback to take place. Lastly, these qualitative findings also indicate a need to reboot the entire educational process, including using the Peer Review.

EXPLORING THE IMPACT OF A HEALTHCARE SYSTEM'S 'SCALING UP PLAN' TO EFFECTIVELY IMPLEMENT, EVALUATE AND SUSTAIN PEER-TO-PEER FEEDBACK TO SUPPORT NURSE AUTONOMY AND PATIENT SAFETY

A Futuristic Framework for Scaling up Peer-to-Peer Feedback

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The final session's goal is to share our healthcare system's journey in 'Scaling Up' our Nursing *Peer-to-Peer Feedback* program, to gradually reinvigorate, evaluate and optimize sustainability, and improve nurse accountability/patient safety. We will discuss our challenges/lessons learned with suggestions for a futuristic platform to execute a dynamic peer feedback program. Our hope is that the evidence-based strategies shared will help any healthcare system cross the quality *chasm*, to create a safer environment that allows prevention and correction of real/potential errors during patient care.

In revitalizing the nursing peer feedback (PF) program, the methodology used was reflective, dynamic, and iterative in nature. A gap analysis of adverse events and PF process revealed a need to revise the program. To scale up the process, we developed a system 'roadmap' in partnership with the quality/safety, care experience teams, union partners, and clinical nurses. Brainstorming meetings revealed, communication opportunities, and inconsistencies of what, when, and where PF should take place. The team developed synergistic goals focused on identifying and addressing: Areas for improvement in practice/safety; barriers impacting PF and patient care; and ways to enhance nursing performance/and improve outcomes to help devise strategies for success. A major outcome was a multi-site research study to help understand clinical nurses' perception of what peer feedback meant, how it was conducted, and the barriers and strategies observed to support the PF process. Several clinical nurses were involved in the study as co-investigators and were highly engaged in the scholarly activity.

Baseline study results validated peer feedback is a meaningful/valuable process used by clinical nurses to support professional growth and development, yet opportunities exist for improvement. Quantitative/qualitative data served as underpinnings to redesign a 'roadmap' to include revised standards / accountabilities for the peer feedback process (clinical/management); real-time education and tools to support the development of nurse competencies in PF, while monitoring the process, including safety outcomes. System-wide strategic goals included further research to examine the impact of an educational program to strength PF. The new study- Nurses Perception of Professional Peer Feedback r/t Nurses Knowledge Exchange (NKE- plus) during Bedside Shift Report: A Multi-Site, Pre-and-Post Intervention Study has begun at three additional Southern California Medical Centers.

Optimize the 'Shared Governance' structure, membership, leaders, and frontline nurses to contribute to the PF's overall redesign and oversight process. Leverage and build on existing structures, standardize processes, and redefine outcome measures to align with strategic priorities were key in PF's "scale-up" initiative. In addition, ongoing flow of communication of the process improvement was vital, to make PF more robust and transparent. Lastly, all forms/tools and practices may need to be embedded within an electronic platform, for time-savings / efficiency purposes, and documentation.

Developing programs like PF provide organizations with information/knowledge required to make informed, data-driven decisions. These decisions are pivotal in promoting a safety culture stemming from process improvements. Continually educating nurses about the PF benefits, will promote nurse accountability, growth, and autonomy while concurrently preventing potential event reoccurrence. Thus, propagating the enculturation of a more sustainable, "scaled-up" PF practice.

FAMILY CAREGIVING IN THE CONTEXT OF SERIOUS ILLNESS: ASSESSMENT AND SUPPORT FOR AN INVISIBLE WORKFORCE

Overview: Family Caregiving in Serious Illness: Supporting an Invisible Workforce

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Family caregivers—related by kinship, marital status, or strong social ties—provide unpaid care to some 45 million people in the United States living with serious illness. Defined as having one or more health conditions that carry "high risk of mortality and either negatively impact daily function or quality of life, or excessively strain their caregivers", serious illness affects about 14% of the population and accounts for 56% of national healthcare expenditures. Not included in these costs are the many contributions of family caregivers: 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; performing medical / nursing tasks in the home; 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 physical, mental, social, spiritual, and financial health. Importantly, the health effects of caregiving may be amplified in serious illness due to requirements for more caregiving hours, greater likelihood of performing complex medical/nursing tasks, and, for many, involvement in the complex 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 higher risk.

This symposium highlights research focused on family caregiving in the context of serious illness. Two of the presentations focus on care recipient hospitalization addressing questions of caregiver characteristics that might be identified to inform targeted interventions; caregiver physical health, psychosocial and financial outcomes associated with care recipient hospitalization; and understanding the perspectives of nurses and family caregivers on family caregivers' roles expectations and involvement in function-preserving and emotional support during an acute hospitalization of older adults. A third paper considers the caregiving role and health related health outcomes by caregiver generation, recognizing that different generations face different competing priorities including caring for young children or their own challenges with aging while simultaneously engaging in caregiving. A fourth focuses on risk comparison of California caregivers seeking support from the network of statewide Caregiver Resource Centers relative to caregivers in state-wide and national surveys. The final paper uses a novel data source, comments posted to Reddit message boards by caregivers in home settings, to understand the nature of the burdens faced by caregivers, including the impact of the COVID-19 pandemic.

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 serious illness.

FAMILY CAREGIVING IN THE CONTEXT OF SERIOUS ILLNESS: ASSESSMENT AND SUPPORT FOR AN INVISIBLE WORKFORCE

Caregivers Engaged in Complex Care in California

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Purpose: The aim of this study was to describe the population served by California Caregiver Resources Centers (CRCs) and compare caregiving characteristics, activities, and health outcomes with family caregiver populations from statewide and national surveys.

Background: Family caregivers play an important role caring for individuals with serious illness in the community, often at the expense of their own health, social, and economic wellbeing. Caregivers' needs are often overlooked in the clinical setting, and community organizations frequently fill the gap by providing caregiver supports. California has a network of eleven nonprofit CRCs that fulfill this role across the entire state. In 2019, all eleven CRCs deployed CareNav™, an online standardized caregiver assessment system. CareNav™ provides detailed data about the characteristics and experiences of the large population served by the CRCs. However, the caregiver population seeking services in the CRC system has not previously been described or compared with state or national caregiver populations.

Methods: Using CareNav™, we identified n=5,935 caregivers who completed an assessment in the 2020-2021 fiscal year. Their data were compared against state (2019 California Health Interview Survey-CHIS; n=2,470) and national samples (2019 Caregiving in the United States Survey-CGUS; n=1,558 of caregivers). Specifically, we examined caregiver characteristics (age, sex, race/ethnicity); caregiving activities (weekly caregiving hours, care recipient relationship, care recipient primary diagnosis, medical/nursing task performance, and caregiving intensity); and health outcomes (self-rated health, and loneliness). Caregiving intensity was calculated based on weekly caregiving hours and the number of activities/ instrumental activities of daily living (ADLs/IADLs) requiring caregiver assistance. Comparison data for medical/nursing task performance and caregiving intensity were only available in CGUS, while comparison data for health outcomes were only available in CHIS.

Results: The percentage of CRC caregivers age 65 and older (39%) was comparable to CHIS caregivers (38%), and higher than CGUS caregivers (27%). Compared to CHIS and CGUS caregivers, a larger percentage of CRC caregivers were female (70% vs. 60-63%) and Latinx (31% vs. 15-18%). A much higher percentage of CRC caregivers spent 40 or more hours per week on caregiving (73%) compared to CHIS (9%) and CGUS (32%). CRC caregivers were more likely to care for a spouse or partner (35% vs. 17-20%), or a care recipient with Alzheimer's Disease or related dementias (68% vs. 5-6%). Compared to CGUS caregivers, a larger proportion of CRC caregivers reported performing medical/nursing tasks (79% vs. 58%),and providing high-intensity care (90% vs. 41%). Compared to CHIS caregivers, a larger proportion of CRC caregivers reported poor health (7% vs. 3%), and loneliness (35% vs 5%).

Implications: The CRC system serves a vulnerable population of caregivers engaged in high-intensity, complex care. Compared to the general population of caregivers in California and nationally, there are numerous risk factors that indicate higher need for support. State and national surveys may underestimate the burden of caregiving, especially since those involved in high intensity caregiving may be less likely to respond to surveys. This calls for clinical and policy attention to ensure availability of adequate support for caregivers engaged in high-intensity, complex care.

Funding: Family Caregiver Alliance A20-360

FAMILY CAREGIVING IN THE CONTEXT OF SERIOUS ILLNESS: ASSESSMENT AND SUPPORT FOR AN INVISIBLE WORKFORCE

Using Ethical Dilemmas as a Window into Family Caregiver Burden

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Background: This project exploits a novel data source to explore caregiver burden. Between April 2015 and April 2020 approximately 12,500 posts were uploaded to /r/CaregiverSupport and two other caregiver-focused forums on Reddit. We performed several qualitative analyses of these posts to characterize the nature and prevalence of the kinds of burdens caregivers face.

Methods: Our primary analysis consisted of an effort to establish a set of rich thematic variables as descriptors of our data. To make this task manageable, we screened our data according to whether a post expressed an ethical dilemma – that is, some kind of ethical or moralized uncertainty, doubt, fear, question or concern. We chose this screening logic because some of our ongoing but independent research suggests that caregivers use the construct of an ethical dilemma as a device for expressing the most difficult aspects of providing care. We then used a simple grounded-theory process to construct coding themes for the cases which passed through our screen. Finally, we also carried out a sentiment analysis on both the screened and unscreened data to map trends in caregiver sentiment, and also to attempt to identify any large changes in sentiment that could be attributed to the onset of the COVID19 pandemic.

Results: Our screen generated approximately 1,875 cases for analysis. For these cases, we reached saturation at sixteen thematic categories, which we treated as non-mutually-exclusive variables, allowing us to code each post with up to seven categories. The modal number of themes which applied to each of our cases is three. The most common themes are *burnout*, *seeking validation*, *reports of financial burden*, *feelings of guilt*, *feelings of loneliness*, *reports of being forced into caregiving*, and *descriptions of dealing with ungrateful dependents*.

Our sentiment analysis, while interesting, was analytically inclusive.

Conclusion: Unfortunately, our findings contain no unexpected happy news: our results indicate that, when caregivers turn to each other for support resolving an ethical dilemma, they do so when they are facing some of the most difficult burdens of modern life.
This study highlights the value of trying to understand the burdens and stresses that caregivers live with using naturalistic data collection methods – as this is very much an "in their own words" study. Furthermore, because studies like this are inherently free from certain well-known biases (e.g., agreement bias and social desirability bias) that impact interviews and surveys, our results can be a source of contrast classes for other caregiving researchers interested in understanding caregiver burden.

Funding: The Gordon and Betty Moore Foundation

Associations of Care Recipient Hospitalization and Caregiver Well-Being

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Background: Family caregivers provide essential unpaid care services to a growing number of individuals in the US with chronic and disabling illnesses, contributing to increased burden that negatively impacts well-being. Care recipient hospitalization presents a stressor that could affect caregiver well-being; however, no population-based studies have examined these associations. The purpose of this study was to examine a) characteristics of caregivers whose care recipients experience hospitalization; b) associations between care recipient hospitalization and reported caregiver physical, emotional, and financial strain.

Methods: Using data from the 2020 Caregiving in the U.S. Survey sponsored by the National Alliance for Caregiving (NAC) and the American Association of Retired Persons (AARP), we categorized caregivers as reporting their care recipient was hospitalized within the last year (yes/no) and compared the socio-demographic and health characteristics between the two groups. A multiple logistic regression model was fit with care recipient hospitalization as the outcome. Additionally, we used multiple logistic regression to examine three outcomes as functions of care recipient hospitalization. The outcomes were derived from questions asking about the extent to which caregivers experienced: 1) Emotional strain; 2) Physical strain; and 3) Financial strain, each coded on a 5-point Likert scale and categorized as "none" rated 1 versus "any" rated 2 through 5. All regression models controlled for the caregiver socio-demographic and health characteristics and used survey weights to account for the complex sampling design.

Results: Of the caregivers included in the sample (n=1,549), 51.6% cared for someone who was hospitalized at least once within the past year. Compared to caregivers whose care recipients were not hospitalized, those with hospitalized care recipients reported higher rates of emotional stress (88.4% v 77.4 %, p=0.01), physical strain (76.3% v. 63.7%, p=0.01), and financial strain (40.8% v. 29.7 %, p=0.01). In fully adjusted logistic regression models, caregiver characteristics associated with higher odds of care recipient hospitalization included: living with the care recipient, reporting high burden of care, receiving paid help, and caring for an older adult or someone with cancer. Care recipient hospitalization was associated with higher odds of caregiver emotional strain [OR=2.24; 95% CI: 1.60, 3.12], physical strain [OR=1.60; 95% CI: 1.22, 2.09] and financial strain [OR=1.69; 95% CI: 1.30, 2.19]).

Conclusion: Family caregivers whose care recipient is hospitalized may be at risk for adverse health outcomes. Further study is needed to develop and test interventions to mitigate health effects on caregivers of hospitalized care recipients. Our findings suggest such intervention might be targeted toward those at higher risk, including caregivers with higher burden, paid help, residing with the care recipient, and those caring for older adults or individuals with cancer.

FAMILY CAREGIVING IN THE CONTEXT OF SERIOUS ILLNESS: ASSESSMENT AND SUPPORT FOR AN INVISIBLE WORKFORCE

Burden of Care across Generations: The Millennial Family Caregiver Experience

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Aims: To explore associations between membership in a generational cohort (Millennial, Generation X, Baby Boomer) and caregiver burden and experiences.

Background: Family caregiving is a staple in households throughout the United States, yet family caregivers remain largely invisible and unsupported. As the older population continues to grow in number, the ratio of care recipient to caregiver is widening at an alarming rate. A new generation of young adults is now contributing to address this gap despite competing demands including work and caring for young children. To date, no study has investigated the experiences of this young group of caregivers or differences in well-being and burden of caregivers across generations. Identifying each generation's unique characteristics and stressors will help inform policy on measures to support caregivers and their care recipients.

Methods: This secondary analysis used a cross sectional study design and publicly available data from the 2020 Caregiving in the U.S. Survey conducted by the National Alliance for Caregiving (NAC) and the American Association of Retired Persons (AARP). The sample inclusion was identifying as a caregiver of an older adult age 65 or older. Caregivers (n=1,094) were categorized as millennials if born between 1980-1996; Gen X if born between 1965-1979; and Baby Boomers if born between 1946-1964. Outcomes measured included financial strain related caregiving (measured on a 5-point Likert scale and categorized as "none"=1 or "any"=2 through 5) and caregiver report of needing help with stress management (yes/no). Socio-demographic and caregiver covariates were compared by generational cohort using chi-square tests. Logistic regression was used to examine the associations between generational cohort and the outcomes, controlling for all covariates. In all analyses, survey weights were applied to account for the complex sampling design.

Results: Baby Boomer caregivers comprised 42% of the sample, while Gen X comprised 31% and Millennials comprised 27%. Compared to their Baby Boomer counterparts, Millennial and Gen X caregivers were more racially diverse, more likely to work full time, and less likely to receive paid help. Over 60% of caregivers in each generation identified as primary caregiver for their care recipient. Despite most caregivers reporting they had a choice in caregiving, more than 70% of all caregivers reported high physical strain, and more than 80% reported emotional strain. In fully adjusted models, Millennial caregivers were more likely to report high financial strain (OR=2.52; 95% CI: 1.72, 3.71; $p<0.01$) and needing help with managing emotional stress (OR=1.73; 95% CI: 1.14, 2.65; $p=0.01$) when compared to Baby Boomers; whereas members of Gen X were no more likely than Baby Boomers to experience these outcomes.

Conclusion: Results of this study indicate Millennial caregivers may experience higher financial strain and stress than their older counterparts. As Baby Boomers become care recipients themselves, Millennials will face further expectations as family caregivers, increasing demand for caregiver supports, including financial and mental health resources. Policies and resources must be reimagined to better support these young caregivers who will grapple with family care for decades while managing competing demands at work and at home.

FAMILY CAREGIVING IN THE CONTEXT OF SERIOUS ILLNESS: ASSESSMENT AND SUPPORT FOR AN INVISIBLE WORKFORCE

Family Involvement during Acute Hospitalization: Families' and Nurses' Perceptions

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Background: Preserving functional and emotional status during an acute hospitalization is significantly associated with outcomes in older adults. Nurses are the front-line personnel responsible for preserving function and providing emotional support during acute hospitalization. There is growing evidence, mainly from the Asian and middle east countries, that family members who accompany older adults during their hospitalization are also involved, in preserving function, such as help with activities of daily living (ADLs). This creates interdependency between nurses and family members and a need for nurse-family partnerships. Nonetheless, the expectations for family caregiver involvement and the way nurses and families manage interdependency in preserving function and emotional support are unclear. The purpose of this study was to understand the perspectives of nurses and family caregivers on family caregivers' roles expectations and involvement in preserving function and emotional support during an acute hospitalization of older adults.
Methods: Qualitative descriptive study design was used to collect data from semi-structured interviews with a convenience sample (N=20) of 11 registered nurses working in medical or surgical units in general hospitals and 9 family members (7 children and 2 spouses) who accompanied older adults during an acute hospitalization. The interviews were performed in Israel (in Hebrew, Russian or English, according to the family member's preference), via Zoom, and lasted 30 to 60 minutes. Thematic analysis was used to analyze the data and inductively capture key patterns and emerging themes.
Results: Three key themes emerged from the study. First, both nurses and family members consider the main (and sometimes exclusive) role of family members as providing emotional support. Second, perceptions of family members and nurses vary in regards to the ideal involvement of family members in ADLs. For example, some participants encourage complete involvement of family members in all ADLs and others discourage involvement in those activities, citing potential harm to both patient and family. While family members tend to perceive their involvement as facilitating the work of nurses, a perception shared by some nurses, other nurses spoke about family caregivers as additional patients. Third, nurses commonly rely on their "intuition" to determine a caregiver's preferences for involvement and their capabilities in this regard. While participants emphasized prior family members' experience in managing ADLs as an important consideration, a formal assessment of caregivers' capability was not performed.
Conclusion: The findings point to incongruency in nurses' and family members' perception on families' actual and desired roles in preserving function and providing emotional support, warranting further research to understand and align role expectations. The identified use of intuition rather than a formal assessment of caregiver's capability also highlights important areas of nursing education and practice for further exploration. Core to family centered nursing care, partnership between families and professionals in provision of healthcare is widely acknowledged as producing better outcomes. Further research should evaluate structures and mechanisms of interdependency between nurses and family caregivers in various processes that support family centered nursing care in the context of diverse expectations.

Funding: The Israel National Institute for Health Policy Research

PRIMARY PALLIATIVE CARE FOR THE HOUSELESS: LEVERAGING THE POWER OF ACADEMIC-PRACTICE PARTNERSHIPS

Overview: Primary Palliative Care for the Houseless through Academic-Practice Partnerships

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Purpose: The current state of healthcare for houseless individuals is inadequate. Houseless individuals with serious mental illness (SMI) struggle to access quality primary, mental health, and end-of-life care that sufficiently addresses these overlapping matters, especially in the context of multiple co-morbid conditions. This symposium presents details of the development of a primary palliative care model into an existing nurse-managed primary care clinic serving a houseless population in the Pacific Northwest.

Background: Houselessness continues to increase at an alarming rate. Between 20-40% of the houseless suffer from SMI. While not traditionally framed as a palliative care issue, those with SMI have a decreased life expectancy of 28.5 years. Palliative care is an approach to physical, psychosocial, and spiritual care that improves quality of life for those facing life-threatening illness. Approaching care of the houseless with SMI through a palliative care framework could modify chronic conditions with primary care, while providing comprehensive care that addresses the complexity and life-limiting nature of these conditions.

Description:

1) *Primary Palliative Care for Houseless Populations: The Power of Partnerships*

The project originated with several nurse leaders establishing the Harrington Health Clinic (HHC), a nurse-managed primary care clinic to serve a houseless population in the Pacific Northwest. Leveraging a decades-long partnership between a private university and a non-profit organization serving the needs of the houseless, HHC implemented the primary palliative care model into clinical operations.

2) *Primary Palliative Care Training: Module Development and Evaluation*

The research team developed evidence-based training modules for all clinicians and students to complete prior to implementation of the model into practice. Four learning modules were created, and included a pre-and-post-test evaluation for participants.

3) *Implementation of Palliative Care Screening in a Primary Care Clinic for the Houseless*

The model was imbedded into the HHC operations. The outcome included a process for the RN to conduct palliative care screening of all patients upon intake into the clinic, and a clinical decision model for referral to the NP if a palliative care plan was indicated.

4) *Primary Palliative Care Outcomes: A Synthesis Activity to Evaluate Implementation*

The project concluded with an evaluation of clinician and student learning. A synthesis activity, including case study simulations, provided participants the opportunity to use emotional awareness, engage in reflective practice, and apply advanced communication techniques.

Assessment of Findings: Results demonstrated strong integration of training modules into clinical practice, and an efficient and effective model of providing primary palliative care. This model of nurse-managed care honors dignity and humanity by providing collaborative, nurse-driven palliative care through the trajectory of SMI to end-of-life for those struggling through life on the streets.

Conclusions: Houseless individuals deserve equitable, non-discriminatory care to enhance their health, safety, and well-being. Primary Palliative Care is a feasible and effective model to include in primary care for those who are houseless. Providing nurse-managed care to those with SMI through a framework of primary palliative care results in a more dignified end-of-life experience, increasing quality and accessibility of palliative care for the houseless.

Funding: Rita & Alex Hillman Foundation

PRIMARY PALLIATIVE CARE FOR THE HOUSELESS: LEVERAGING THE POWER OF ACADEMIC-PRACTICE PARTNERSHIPS

Primary Palliative Care for Houseless Populations: The Power of Partnerships

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Purpose: Embedding a primary palliative care program into an existing nurse-managed primary care clinic aimed to more effectively treat the serious mental illness (SMI) in a houseless population as any other serious, life-limiting illness. The ultimate goal was to bring together palliative, psychiatric, and primary care to provide best practices in transitions to end-of-life care, and assist providers in having goals-of-care conversations.
Rationale: Emergent and pressing impacts of the housing crisis continue to increase houselessness at an alarming rate. While nearly half of the houseless suffer from SMI, there is little support in community-based care to identify and treat SMI in conjunction with other comorbid conditions. SMI is not typically treated as a life-limiting illness, but with the confounding conditions of houselessness it is appropriate for treatment with palliative care. This lack of coordinated care from a palliative care framework for this vulnerable population leads to fragmented care, higher health care costs, and lower quality of life.
Approach: Building on decades-long relationships, nurse faculty and alumni from a private faith-based university partnered with a non-profit organization serving the needs of the houseless in the Pacific Northwest. The collaboration sought to establish a nurse-managed clinic and implement a model of primary palliative care. Through an ethos of nurse-driven, patient-centered care, the resulting model uses a palliative care framework in the management of physical, psychosocial, and spiritual care that improves quality of life for houseless patients with SMI facing life-threatening illness.
The model draws on demonstrated, evidence-based practices in palliative care with the National Consensus Project Clinical Practice Guidelines for Quality Palliative Care; SMI care with SAMHSA's Protocol for Behavioral Health Services for People who are Homeless; and clinical care for the houseless population, through the National Health Care for the Homeless Council's adapted guidelines.
Outcomes: The resulting model consists of a standardized training program with evidence-based modules for licensed clinicians and students, a workflow for intake, assessment and palliative care screening, and a process for the RN to refer patients to the NP for development of a primary palliative care plan if indicated. The program has demonstrated effective outcomes with 100% of patients receiving screening, and participants in the pilot of the training modules providing high evaluations of effectiveness and applicability.
Conclusions: The findings of this project support the implementation of palliative primary care into a nurse-managed primary care clinic serving a houseless population. Next steps will be evaluating the impacts on cost and healthcare utilization, and further demonstration projects with similar clinics in other areas of the region. Embedding this model into primary care will more effectively treat SMI as a life-limiting serious illness in the houseless population. Further, it will assist providers in having goals-of-care conversations, bringing together palliative, psychiatric, and primary care to provide best practices in the transitions to end-of-life care.

Funding: Rita & Alex Hillman Foundation

PRIMARY PALLIATIVE CARE FOR THE HOUSELESS: LEVERAGING THE POWER OF ACADEMIC-PRACTICE PARTNERSHIPS

Primary Palliative Care Training: Module Development and Evaluation

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Purpose: Recognizing the multidimensional needs of clients with serious illness, subject matter experts developed four educational modules for clinicians and students completing clinical rotations. The purpose of these modules was to emphasize concepts critical to developing skills in primary palliative care.

Educational Methods and Content: Online, self-paced modules were developed on 4 topics: communication, trauma-informed care, serious mental illness, and palliative care. Modules were made available to participants two-weeks prior to their work at the clinic serving houseless individuals with complex needs. Modules included evidence-based care principles and practices, reflective activities, and links to a wide variety of additional resources available to participants on an ongoing basis. The communication module presented elements of effective communication, including acknowledgment and management of provider emotions. A second module introduced learners to key assumptions of trauma-informed care and explored methods for providing health care in a trauma-informed environment. The third module presented principles of serious mental illness, including signs and symptoms of depression, bipolar disorder and psychosis, and medication side effects, as well as nursing and provider assessment of mental health treatment histories. The palliative care module introduced learners to the holistic and interdisciplinary framework for primary palliative care, which aims to relieve symptoms and improve quality of life. Content focused on identifying clients who might benefit from palliative care in the primary care setting and emphasized assessing client goals, values, and health care preferences.

Evaluation Methods: All participants completed a quantitative evaluation of confidence, knowledge, and perceived barriers to care prior to engagement with the modules and 6-8 weeks following completion of the modules, engagement in care at the clinic, and participation in a synthesis activity.

Results: Following engagement with the learning activities, there was a slight increase in confidence and knowledge. Prior to the learning activities, participants' confidence and knowledge, on average, skewed towards disagreement with statements reflecting their ability to talk to and support the needs of individuals with complex needs. Following the learning activities, participants, on average, agreed with statements of knowledge and confidence in this work. There was an increase in perceived barriers to working with individuals with palliative care, trauma informed, and serious mental illness needs. Participants completed their post ratings immediately following a role play in the synthesis activity. It could be that immediately following their interaction with a guest actor with complex needs, they reflected on the gravity of this work and the challenge inherent in supporting a patient with a life-limiting illness.

Implications for Practice: The modules contained a purposeful mix of drawing upon participants' existing knowledge, increased awareness of factors impacting the complexity of care of houseless individuals, and actionable steps participants could take in their work with this population. Potentially further bolstering the participants' confidence was utilization of these skills in practice at the clinic and during the synthesis activity role play, a safe environment where participants could apply these skills. Findings demonstrate participant growth following engagement with the program, but also a need to further refine the learning activities.

Funding: Rita & Alex Hillman Foundation

PRIMARY PALLIATIVE CARE FOR THE HOUSELESS: LEVERAGING THE POWER OF ACADEMIC-PRACTICE PARTNERSHIPS

Implementation of Palliative Care Screening in a Primary Care Clinic for the Houseless

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Purpose: This project implemented a palliative care screening process designed to integrate palliative care screenings, referrals, and services into a primary care clinic for a transitional houseless population.

Background: In 2018, the University of Portland School of Nursing (UPSON) partnered with alumnus nurse practitioner Emily Harrington and the Blanchet House, a non-profit organization in Portland, Oregon serving the needs of the houseless population. Together, they established the Harrington Health Clinic (HHC) a nurse-led clinic developed to provide primary care, mental and behavioral care, health and wellness, palliative care and telemedicine services on-site to the Blanchet House guests, a transitional houseless population. HHC is owned and operated by Ms. Harrington, a nurse practitioner (NP) dually licensed as a Family Nurse Practitioner (FNP) and Psychiatric Mental Health Nurse Practitioner (PMHNP), with UPSON faculty holding dual appointments as FNP's and Registered Nurses (RN) who provide care and precept undergraduate and graduate students.

Methods: The research team developed an evidence-based palliative care model to implement into the primary care workflow of the HHC. The Supportive and Palliative Care Indicators Tool (SPICT) was selected as a palliative care screening tool. The SPICT assists primary care providers in identifying which clients may be at increased risk of dying or health deterioration related to chronic conditions and may benefit from palliative care services. Formatted as a check-list, the SPICT has a three-part structure which includes review of general indicators, clinical indicators, and recommendations for reviewing and planning care. The SPICT tool was adapted for the HHC intake assessment process and medical record management system. Other tools used in the model include the Palliative Performance Scale (PPS), a researcher-designed Palliative Care SBAR Referral Form, the Memorial Symptom Assessment Scale, and a Palliative Provider Assessment form. The palliative care screening and referral process was designated into the scope of the RN role, with referral to the NP for additional screening and primary palliative care planning, or referral to specialty palliative care if indicated.

Outcomes: A Harrington Health Clinic Hillman Grant Palliative Care Screening and Referral Process binder, workflow and communication process were created to guide clinical practice. The binder includes: 1) RN role and responsibilities for Hillman Grant Palliative Care Screening and Referral Process; 2) SPICT Tool; Palliative Performance Survey (PPS), and Palliative Care SBAR Referral Form (all forms dedicated to the RN role); 3) NP role and responsibilities for Hillman Grant Palliative Care Screening and Referral Procedure; and 4) Memorial Symptom Assessment Scale (for reference) and the Palliative Provider Assessment form (all forms dedicated to the NP role). Ongoing quality improvement processes are in place to refine the clinical implementation of the model for clinician and patient effectiveness.

Conclusions: Implementing a primary palliative care model into an existing primary care clinic effectively integrated palliative care screening and referrals for supporting the primary care services for a houseless population. Next steps will include continued process evaluation, expansion of screenings and further dissemination.

Primary Palliative Care Outcomes: A Synthesis Activity to Evaluate Implementation

***Lindsay Benes**, PhD, RN, CNS, College of Nursing, Montana State University, Missoula, MT; **Maren Nelson**, DNP, RN, School of Nursing, University of Portland, Portland, OR*

Purpose: Participants' engagement with the learning modules and clinic culminated in a synthesis activity. Through the synthesis activity, students utilized emotional awareness, engaged in reflective practice, and applied advanced communication techniques to assess and improve facets of each module skill area.

Learning Format: Synthesis activities were specifically designed to provide generalist nursing students and clinicians with new ways to apply their knowledge and skills within a standardized education format. Participants' learning experience included providing care to complex patient presentations which are otherwise encountered in more specialist practice settings (e.g. palliative and hospice care, mental health). Throughout the activity participants had opportunity to assess their own baseline skill level and consider novel approaches, while observing colleagues' learning and gaining feedback from each other.

The synthesis activity included three parts:

1. An introduction to the concepts and role of emotional awareness and reflective practice as a method of self-assessment in the service of building complex, nuanced skills.
2. Two case studies highlighting scenarios in which concepts gleaned from the learning modules could be applied and practiced.
3. Debriefing sessions.

The case studies presented several scenarios where patient actors with significant clinical and psycho-social burdens were introduced to the students. The case studies provided real life examples of illnesses where students were required to apply the knowledge and skills gleaned from the learning modules – knowledge which they would not be expected to know from previous life or work experiences.

Methods: Qualitative evaluation of the synthesis activity occurred through analysis of field notes kept throughout the entirety of the activity. During each synthesis activity, one researcher maintained field notes, documenting the participants' engagement and responses within the case studies and reflective debrief. The field notes were reviewed in depth and coded according to key points from the educational modules.

Results: Palliative care integration: Students demonstrated emphasis on patient comfort, relief of symptoms, and quality of life. They worked to obtain the client's health-related goals along with assessments applicable to a client needing palliative care.

Trauma informed care integration: Throughout their interactions, the participants displayed the principles of collaboration and mutuality along with empowerment, voice, and choice. Upon debriefing, all participants acknowledged the challenge of this work and desired growth in their skills and abilities.

Serious mental illness integration: When assessing for serious mental illness, the participants used open ended questions, asking the client to describe what he was feeling. In assessing the client's interest in treatment, the students clearly defined their scope of practice as RN students and how that would differ from a therapist's scope of practice.

Effective communication: The participants exemplified use of effective communication skills presented in the educational modules. Participants demonstrated use of active listening through reflective statements and empathy through acknowledgement and validation of client feelings.

Conclusion: The synthesis activity reflected strong integration of the training modules' key points and offered participants a robust mechanism to apply their learning. Participants demonstrated use of skills and recognition of principles regarding care of this population with complex, multifactorial needs.

Funding: Rita & Alex Hillman Foundation

QUALITY, SAFETY, VALUE: IMPACT OF SUDDEN SHIFT TO TELEHEALTH DUE TO COVID-19 WITHIN NURSE-LED CARE MODELS LOCATED IN COLORADO RURAL AND URBAN COMMUNITIES

Overview: Impact of Telehealth on Nurse-Led Care Models in Rural and Urban Communities

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Purposes/Aims: The COVID-19 pandemic represents the most significant natural experiment of our time. Its elusive and rapid pattern of spread resulted in an undeniable impact on global health, stressing financial, social, and environmental ecosystems. The long-term goal of leveraging this natural experiment is to evaluate telehealth to support vulnerable patients seeking nurse-led care within behavioral health, primary and prenatal care, and home visitation models in urban, rural, and frontier communities across Colorado. Through statewide network collaboration, our central hypothesis is that the benefits of nurse-led care will withstand rapid telehealth implementation in Colorado in response to COVID-19. Study aims include:

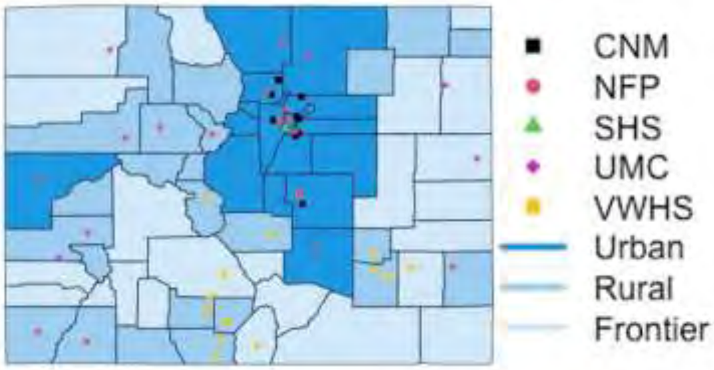
- Evaluate and rapidly disseminate the impact of sudden telehealth implementation on healthcare utilization in nurse-led models of behavioral health, primary/prenatal care, and home visitation in Colorado among vulnerable populations.
- Evaluate and rapidly disseminate the consequences of sudden telehealth implementation on patient outcomes following COVID-19 within nurse-led models of care in Colorado.
- Characterize the patient and provider experience of sudden telehealth implementation in Colorado.

Rationale/Conceptual Basis/Background: COVID-19 jeopardized the already precariously positioned US healthcare system, prompting a sudden shift in the delivery of health services to the telehealth environment for optimized access to care for millions of vulnerable Americans in urban, frontier, and rural communities. In Colorado, innovative nurse-led models of care are a vital component of healthcare delivery, provided through recognized structures of federally qualified health centers (FQHCs), certified nurse midwifery practices, and the Nurse-Family Partnership (NFP) home visitation program. The widespread implementation of telehealth is a change in healthcare delivery that requires systematic study to support within-system learning, rapid adaptation to improve access and health outcomes, and informed enhancements to ensure sustainability to endure future system challenges. While evidence supports positive patient outcomes for nurse-led telephonic and telehealth interventions for specific populations, our nurse scientist led interdisciplinary, integrated, and highly skilled team is evaluating, for the first time, the impact of this urgent and immediate shift from in-person to telecare for an expanded array of healthcare services.

Methods: Using an observational, repeated measures study design shaped by COVID-19 to evaluate and rapidly disseminate within- and between-group telehealth innovations and challenges, we will inform the evolution of this emerging care model to support those with multiple chronic conditions, vulnerable populations, and to reduce disparities in care through a lens of intersectionality.

Results: Each of the abstracts in this symposium report our preliminary findings including positive patient and provider perceptions regarding use of telehealth as well as the higher proportion of phone visits among rural residents.

Implications for Translation to Practice/Further Research/Policy: Innovative nurse-led models of care are a vital component of healthcare delivery now and in the future. Analysis of uniform and claims data, surveys and interviews provides evidence to inform delivery of high quality, safe, accessible, equitable and affordable care. This mixed-methods study supports the paradigm shift of care to telehealth created by COVID-19, informing sustainable models that will maintain the benefits of nurse-led care on population health in Colorado and beyond.



Funding: AHRQ R01 HS028085-01

QUALITY, SAFETY, VALUE: IMPACT OF SUDDEN SHIFT TO TELEHEALTH DUE TO COVID-19 WITHIN NURSE-LED CARE MODELS LOCATED IN COLORADO RURAL AND URBAN COMMUNITIES

Integrating Non-Health Data to Understand Geolocation Diversity within Colorado

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Purpose/Aims: A major goal of data analytics for health disparities research, is to uncover hidden patterns, trends, and correlations that can be used to improve patient outcomes and access to care. Merging, linking, harmonizing, and standardizing information from multiple data sources illuminate additional insights that may have gone undetected by only using single data sources. We sought to characterize the geographic regions of Colorado (urban, rural, frontier), that serve patients under nurse-led models of care, since Colorado's vast geographic diversity impacts patient engagement with telehealth. We hypothesize that heterogeneous socio-environmental factors (e.g. ethnic diversity, household income) define Coloradan's attributes in these geographic regions and contribute to patient health disparities, differential access to care, and telehealth engagement.
Description of Method: We generated geolocation crosswalks, using several publicly available data sources, to identify key intersectionality variables. We obtained Federal Information Processing Standard (FIPS) zip, state, and county codes using the U.S. Department of Housing and Urban Development Housing-United States Postal Service ZIP-COUNTY crosswalk file. We matched state and county FIPS codes by county name, using U.S. Census 2014 state and county information. To obtain county level socio-environmental unique variables (i. e. disparities across geographic regions), we matched Colorado counties to U.S. Census 2019 QuickFacts. We used the 2016 Colorado Rural Health Center County Map to intersect multiple de-identified data sets, which characterize populations served under the nurse-led models of care with county-level geo-designators. We linked provider information to clinics using the National Provider Identifier registry. This allowed us to integrate information about our patient population at the clinic, system, and geolocation levels for future data analysis.
Internal Consistency of the Method: Variables were standardized across data sources and validated during linking procedures. Through weekly peer debriefing and auditing, we synergized our diverse research backgrounds and clinical experiences to ensure our approach and logic was pragmatic while producing high data integrity.
Logic Linking the Method to Nursing Research Problem: In Colorado, innovative nurse-led models of care are a vital component of healthcare delivery for the most ethnically, geographically, and economically vulnerable populations. The widespread implementation of telehealth is a change in healthcare delivery that requires systematic study to support within-system learning, rapid adaption to improve access and health outcomes, and informed enhancements to ensure sustainability for future system challenges. We utilized data driven and complex statistical approaches, innovative to nursing research scientists, advancing progress in population health.
Conclusion: Our approach to integrate non-health data into de-identified datasets allowed us to identify geolocation as the only variable that is consistently and reliably recorded across all our sources of data. This novel approach to data harmonization allows nurse researchers an enhance way to characterize the geographic diversity of Colorado and gives access to more accurate interpretations for geolocation's impact on patient health care outcomes. We have found that geolocation is a confounding variable and will use these integrated data sets to better understand the numerous socio-environmental factors that characterize a patient's geolocation, impacting their access to telehealth.

Funding: AHRQ R01 HS028085-01

QUALITY, SAFETY, VALUE: IMPACT OF SUDDEN SHIFT TO TELEHEALTH DUE TO COVID-19 WITHIN NURSE-LED CARE MODELS LOCATED IN COLORADO RURAL AND URBAN COMMUNITIES

Post COVID-19 Telehealth Access and Attitudes in Rural Vs Urban Colorado Nurse-Led Care

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Purpose/Aim: The purpose of our study was to evaluate telehealth attitudes among vulnerable patients and provider perceptions within nurse-led care settings in frontier, rural, and urban Colorado communities after the COVID-19 pandemic.

Rationale/Conceptual Basis/Background: The COVID-19 pandemic imposed an abrupt shift to telehealth use which created the opportunity to compare organizational, provider, and patient characteristics after the onset of the pandemic. While evidence supports telehealth as an effective option for care delivery, careful evaluation of access and perceptions across diverse ethnic, geographic, and economically vulnerable populations is required. We used an intersectionality lens to evaluate patient and provider perceptions of the sudden shift to telehealth across Colorado nurse-led services.

Methods: The PAtienT Attitude toward Telehealth survey (PATAT), Provider Perceptions about Telehealth, and demographics were collected from patients and providers across three nurse-led care models in Colorado. Relationships between geolocation (Rural/Frontier vs Urban) and attitudes towards telehealth were assessed, with post-hoc analyses of telehealth modality (phone/video) by geolocation, ethnicity, and age. Nonparametric statistical methods were applied (Fisher's Exact Test, Kruskal-Wallis Test) due to non-normal distributions and/or limited sample size; p-values were corrected for multiple testing using the Benjamini-Hochberg False Discovery Rate method.

Results: Patient respondents across Colorado (n=314; 40-49 yrs., 33.5% Urban, 45.7% Rural, 20.8% Frontier) were female (78.6%), non-white (22.7%), and Hispanic (32.3%). The proportion of patients using telehealth in Urban (88.57%) areas was greater than in Rural (71.83%) or Frontier (63.08%) areas (Global $p < 0.001$). Younger patients used video more than older patients (OR= .462, $p<0.001$), while Hispanic/Rural patients reported phone visits. Rural/frontier patients who used video reported higher Trust in the Technology. Post-hoc analyses confirmed that age and televisit modality were confounders for Trust in Technology and Trust in Telehealth Service, respectively (both $p<.05$). Most providers were White (71.5%), with telehealth modality significantly different across geolocation. Video calls were used more frequently than phone by urban providers (77.4% video vs 22.6% phone), with phone calls (57.1%) used by rural/ frontier providers ($p <.023$). There were no differences in providers' perceptions regarding telehealth versus in-person visit across geolocation. When providers were combined across geolocation, office visits were preferred over virtual visits ($p=.001$) for the ability to see a physical problem (97.4% vs 1.3%), to communicate effectively (59.04% vs 3.6%), to create a personal connection with the patient (74.7% vs 0%), and overall quality of the visit (69.14% vs 1.23%). In addition, providers preferred office visits to facilitate continuity of care and coordination with other providers (30.86 vs 12.35%, $p=.011$). Conversely, virtual visits were preferred for accessing patient records during the visit (15.19% vs 46.84%, $p<.001$), timely patient access to follow-up (10.39% vs 45.45%, $p<.001$), and ease of scheduling (32.93% vs 1.02%, $p=.042$).

Implications for Translation to Practice: Our data highlight differences in telehealth access and attitudes across rurality, gender, and ethnicity, which indicate phone over video-based modalities as an effective approach for care delivery among older Hispanic individuals in rural/frontier areas. These findings can inform future policy to address barriers to telehealth access and delivery.

Funding: AHRQ R01 HS028085-01

QUALITY, SAFETY, VALUE: IMPACT OF SUDDEN SHIFT TO TELEHEALTH DUE TO COVID-19 WITHIN NURSE-LED CARE MODELS LOCATED IN COLORADO RURAL AND URBAN COMMUNITIES

A Qualitative Study of Best Practices for Telehealth in Nurse-Led Care Settings

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Purposes: The purpose of this study was to identify best practices for telehealth in nurse-led care settings to guide future acceptability, adoption, implementation and spread of nurse-led telehealth innovations to support the care of vulnerable populations and those with multiple chronic conditions.
Research questions:

- Based on patient and providers experiences, what are best practices to deliver high quality, safe, accessible, equitable, and affordable care?
- How does intersectionality including location (frontier, rural, urban) effect delivery of telehealth?
- What are facilitators and barriers to the implementation of telehealth?
- Which types of care encounters and patient populations are appropriate for telehealth?

Rationale: In Colorado, nurse-led care systems provide health care services to vulnerable populations in urban, rural, and frontier environments. The COVID-19 pandemic prompted a sudden shift to telehealth. This study characterizes Colorado patient and provider experiences of sudden telehealth implementation through a lens of intersectionality to examine health disparities and the effect on vulnerable populations.
Methods: In this qualitative exploratory/descriptive study, we identified a purposive sample of 29 patients and 16 providers who experienced telehealth visits within four nurse-led care settings between March of 2020 and May of 2021. We used maximum variation sampling to ensure heterogeneity and target a wide distribution of participants considering intersectionality. We conducted semi-structured interviews (20-60 minutes) via Zoom or phone with patients and providers to elicit perspectives on facilitators, barriers, and best practices of telehealth care. We used an iterative, inductive, and deductive team-based toolkit of analytic strategies: field notes, qualitative content analysis, consultative and reflexive team analysis, and member checking. Analysis commenced with the first participant interview and proceeded alongside subsequent data collection until informational saturation was met.
Results: We found much higher satisfaction levels and acceptance of telehealth than was reported prior to the rapid implementation of telehealth during the COVID-19 pandemic. Both patients and providers reported unexpected benefits of telehealth including increased accessibility to care and increased efficiency especially in frontier and rural environments. Patients and providers frequently reported that they were surprised by the ability to maintain interpersonal connections and develop rapport via video visit or by telephone.
Themes that we identified related to best practices included establishing boundaries and expectations for telehealth visits, appropriate triage and scheduling to identify which patient visits are appropriate for telehealth, different protocols for established versus new patient relationships, and using multiple modalities (in-person, telephone, and video visits).
Implications for Translation to Practice/Further Research/Policy: Innovative nurse-led models of care are a vital component of healthcare delivery now and in the future. This study supports the paradigm shift of care to telehealth created by COVID-19, informing sustainable models that will maintain the benefits of nurse-led care on population health in Colorado and beyond. This qualitative study indicates offering telehealth options is an efficient way to increase accessibility to health care. Future policy should focus on creating systems that prioritize financial stability and technological infrastructure to continue to offer telehealth especially within rural and frontier communities.

Funding: AHRQ R01 HS028085-01

SYMPTOMS OF WOMEN'S EMOTIONAL DISTRESS AND GLUCOCORTICOID EXPOSURE DURING PREGNANCY: IMPLICATIONS FOR MATERNAL AND INFANT BIOLOGY

Overview: Emotional Distress, Glucocorticoid Exposure and Maternal/Infant Biology

***Sandra Jean Weiss**, PhD, DNSc, FAAN, University of California, San Francisco, San Francisco, CA*

Pregnancy is a period of dynamic psychological and neuroendocrine disequilibrium for both the woman and the baby in her womb. The prevalence of prenatal stress and depressive symptoms among pregnant women is substantial, catalyzed by recognition of pending responsibilities and new roles that will accompany birth of a child. Increased exposure to glucocorticoid hormones is also a signature occurrence of pregnancy, especially during the third trimester. Glucocorticoid exposure stems both from endogenous increases in hormones such as cortisol as the body prepares for delivery as well as receipt of prescribed synthetic corticosteroids by women at risk for early delivery.

There is growing evidence that both maternal emotional distress and glucocorticoid exposure during pregnancy may impact the stress-related physiology of the mother and the neurobiological development of her infant in potentially adverse ways. The goal of this symposium is to enhance knowledge of participants regarding what is known from existing research about these effects and to present new knowledge from 4 studies that examine varied aspects of these relationships. Each of the studies leverages data from a sample of 190 diverse women and infants. Two studies present findings that implicate pregnancy stress, depressive symptoms, suicidal ideation, and prescribed corticosteroids in women’s cortisol dysregulation. Results of 2 other studies show how maternal perceived stress and related life stressors, depression and both endogenous and prescribed glucocorticoids may influence infant biological development, including integrity of the telomeres that protect their chromosomes and characteristics of their microbiome such as composition and diversity of pathogenic and beneficial microbiota. Results of these studies will be discussed and integrated within two inter-related conceptual perspectives: the model of ‘Developmental Origins of Health and Disease’ and theories specific to the Hypothalamic-Pituitary-Adrenal Axis, our primary neuroendocrine system for regulating stress.

SYMPTOMS OF WOMEN'S EMOTIONAL DISTRESS AND GLUCOCORTICOID EXPOSURE DURING PREGNANCY: IMPLICATIONS FOR MATERNAL AND INFANT BIOLOGY

Prenatal Precursors of the Infant Microbiome

***Sandra Jean Weiss**, PhD, DNSc, FAAN, University of California, San Francisco, San Francisco, CA*

Purpose: The primary aim of this study was to determine the relationship of fetal exposure to antenatal corticosteroids during the third trimester of pregnancy to diversity and composition of the neonate's gut microbiome. We also examined microbial alterations associated with maternal stress and depression.

Background: Synthetic glucocorticoids (antenatal corticosteroids; AC) are commonly prescribed to women who are at risk of preterm delivery to reduce morbidity and mortality of children. However, research using animal models has shown that antenatal administration of AC results in fetal epigenetic alterations, altered expression of genes, and a distinct gut microbiota composition at 2 weeks of life. Despite such findings, the effect of fetal exposure to AC on the human neonatal microbiome has received little attention. In addition to the potential effects of AC, there is evidence that maternal emotional distress during pregnancy may influence the microbiome in early life. Animal studies have linked maternal exposure to stressors during pregnancy to decreased diversity of bacterial taxa and lower levels of bacteria that are commonly considered beneficial in the gut microbiota of offspring. Such alterations in the infant microbiome raise substantial concern. The microbiome plays a key role in modulating response to stress. Lack of microbial diversity and a greater abundance of pathogenic micro-organisms in the microbiome have been implicated in a variety of stress-related conditions as well as many other mental and physical health problems.

Methods: Women were recruited from 2 obstetric clinics during the 3rd trimester of pregnancy. This sample of 52 women was part of a larger longitudinal cohort. They completed sociodemographic, depression (Patient Health Questionnaire -9), and stress (Perceived Stress Scale) measures. Stool samples were acquired from neonates at 2-3 weeks postnatal. Samples were submitted for DNA extraction (using a modified CTAB protocol), PCR amplification of the V4 hypervariable region of the 16S rRNA gene, and DNA sequencing on the Illumina NextSeq. Analyses determined diversity and abundance of varied bacterial taxa in the infant gut microbiome. Data from the medical record were used to determine receipt of antenatal corticosteroids (AC) as well as gestational age and neonatal morbidity. Multivariate regression and analysis of covariance were used to examine the aims.

Results: Infants whose mothers received antenatal corticosteroids had significantly depleted (3.16) diversity of their gut microbial communities in contrast to infants who were not exposed to AC (4.18, $p = .01$). Infants of depressed mothers also had significantly depleted and unusual microbiota in contrast to neonates whose mothers were not depressed ($R^2 = .08$, $p = .01$). Both more severe depressive symptoms and higher levels of stress were associated with a greater abundance of bacterial species that modulate metabolism of steroids.

Implications: Exposure to both antenatal corticosteroids and maternal emotional distress during pregnancy may influence early programming and disruption of the infant's microbiome. Results indicate the need for further research to clarify fetal microbial risk and to assess any long-term sequelae associated with these perturbations. Findings may ultimately inform targets for probiotic therapies and elucidate mechanisms underlying development of stress-related disorders.

Funding: NICHD R01 HD102604; NICHD R01 HD081188; Eschbach Endowment

SYMPTOMS OF WOMEN'S EMOTIONAL DISTRESS AND GLUCOCORTICOID EXPOSURE DURING PREGNANCY: IMPLICATIONS FOR MATERNAL AND INFANT BIOLOGY

Stressors and Cortisol during Pregnancy Predict Longer Infant Telomere Length

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Purpose: Our objective was to determine the associations of three components of the stress response (i.e. exposure to stressors, perceived stress, and cortisol secretion) during the third trimester of pregnancy with infant telomere length.

Background: Stress has been proposed as a key contributor to health disparities, and growing evidence suggests stress may lead to chronic disease by shortening our telomeres, the protective nucleotide caps on DNA chromosomes. Infant telomere length is among the strongest predictors of adult telomere length, and understanding how pregnancy stress may contribute to variability in infant telomere length has significant implications for later health. Yet a challenge in understanding effects of pregnancy 'stress' on telomere length is attending to unique components of the stress response which can include the actual exposure to stressors, perceived stress, and cortisol secretion as a biomarker of physiological stress.

Methods: The sample included 60 mother/infant dyads from a larger dataset of a longitudinal cohort study. In their third trimesters, the mothers completed self-report questionnaires (e.g. the Crisis in Family Systems Interview to assess stressors and the 10-item Perceived Stress Scale) and collected their own saliva at four timepoints (waking, 45 minutes after waking, 4 pm, and bedtime) for two days. Average cortisol was calculated from those salivary assays. After birth, a research team member collected a salivary sample from the infant which was used to extract the genomic DNA for telomere assay. Inter-assay variability was controlled for and normalizing procedures were employed in determining T/S ratios of telomere length. We used a multiple linear regression to determine the relationship of stress-related variables to telomere length.

Results: Infant telomere length was significantly predicted by exposure to pregnancy stressors ($\beta = 0.40$, $p = .01$) and average maternal salivary cortisol ($\beta = 0.28$, $p = .03$), but not by maternal perceived stress ($\beta = -0.24$, $p = .11$).

Implications for Research: These findings suggest that increased fetal exposure to an external environment where more stressors are occurring and an internal environment with greater circulating cortisol may contribute to longer infant telomere length. In contrast, the birthing parent's perceived stress in the third trimester appeared to have no effect. Exposure to stressors and heightened cortisol during the final stage of fetal development may lengthen telomeres in order to biologically prepare for higher exposures to stressors after birth, supporting the adaptive ability of the infant. While further mechanistic research is needed before potential interventions could be considered, our findings provide further evidence that exposure to stressors can affect biology even before birth and may have implications for alleviating health disparities in social environments where life stressors are increased.

Funding: R01HD081188 (NICHD at NIH); T32NR016920 (NINR at NIH); T32NR007091 (NINR at NIH)

SYMPTOMS OF WOMEN'S EMOTIONAL DISTRESS AND GLUCOCORTICOID EXPOSURE DURING PREGNANCY: IMPLICATIONS FOR MATERNAL AND INFANT BIOLOGY

Cortisol Dysregulation, Depressive Symptoms and Suicidal Thoughts during Pregnancy

***Shaimaa Elrefaay**, RN, MSN, Nursing, UCSF, San Francisco, CA;* ***Sandra Jean Weiss**, PhD, DNSc, FAAN, University of California, San Francisco, San Francisco, CA*

Purpose: Depression and suicidal risk during pregnancy are growing public health concerns. In addition to the emotional suffering they cause, understanding their biological context is critical in order to prevent adverse effects on pregnancy and to deliver informed care. The aim of this study was to determine whether depressive symptoms and suicidal ideation were associated with distinct features of cortisol dysregulation among women during the third trimester of pregnancy.

Background: The prevalence of depression and suicidal ideation (SI) during pregnancy have increased over the last decade. Suicidal ideation is a severe symptom of depression that is found among women who experience hopelessness and feelings of inadequacy in managing multiple stressors in their lives. Suicidal risk is increased during times of enhanced stress and pregnancy is replete with significant stressors that can adversely impact women. In addition, changing hormonal levels that are a natural part of pregnancy contribute to mood instability that can foster susceptibility to depression and suicide risk. Both depression and suicidal risk have been linked to dysregulation of the Hypothalamic-Pituitary-Adrenal (HPA) axis, our nervous system's primary system for managing stress. But almost nothing is known about these relationships for women during pregnancy.

Methods: The sample included 62 women from a larger longitudinal cohort study who completed the Patient Health Questionnaire – 9 for depression, the Perceived Stress Scale, and a question about the frequency with which they had thoughts about hurting themselves or they would be better off dead. Women also provided saliva samples at 4 points throughout the day for 2 days. These samples were assayed for cortisol and from those values, scores were calculated for 4 cortisol parameters: average cortisol, the cortisol awakening response (CAR), diurnal cortisol slope, and the cortisol area under the curve (AUC_G). Multiple linear regression procedures were employed to determine relationships of depression and suicidal ideation to each of the 4 cortisol parameters, controlling for perceived stress, receipt of antenatal corticosteroids as part of care, and week of gestation at which the cortisol samples were acquired.

Results: More severe depressive symptoms were negatively associated with diurnal cortisol slope ($b = -.33$, $p = .025$), indicating a blunted cortisol decline from waking to bedtime. In contrast, suicidal ideation was negatively associated with a flattened cortisol response after waking (CAR; $b = -.43$, $p = .022$).

Implications: Results indicate that depression and suicidal ideation may affect the HPA axis during pregnancy in different ways, or that these different cortisol perturbations may reflect unique mechanisms underlying the two symptom states. However, both a blunted diurnal slope and flattened CAR have been associated with worse mental health status in other populations. In addition, each of these reflect a dampened or suppressed HPA axis and has implications for potential disturbances in the woman's normal cortisol circadian rhythm. Further research is needed to assess the effects of these distinct indicators of cortisol dysregulation on the mother's physical health and the well-being of her fetus and infant.

Funding: NICHD R01 HD081188

SYMPTOMS OF WOMEN'S EMOTIONAL DISTRESS AND GLUCOCORTICOID EXPOSURE DURING PREGNANCY: IMPLICATIONS FOR MATERNAL AND INFANT BIOLOGY

Antenatal Corticosteroids and Stress Association with Cortisol in Late Pregnancy

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Purpose: One aim of this study was to determine if women's receipt of prescribed antenatal corticosteroids was related to their cortisol regulation during the third trimester of pregnancy. We also examined whether specific symptoms of stress were more closely associated with cortisol regulation than women's overall level of stress.

Background: Antenatal corticosteroids are administered to women if preterm birth is threatened in order to improve infant survival after delivery. However, there is preliminary evidence that these exogenous corticosteroids may perturb women's cortisol regulation. In addition, there are mixed findings regarding the effects of general perceived stress on cortisol regulation; however, no study has examined whether specific symptoms of stress may have a more salient relationship to cortisol than others.

Methods: The sample included 71 women between the ages of 21-47 who were part of a larger cohort study. Women completed the Perceived Stress Scale and provided saliva samples 4 times a day over 2 consecutive days. Based on values from salivary assays, average cortisol, the cortisol awakening response (CAR), diurnal cortisol slope, and cortisol area under the curve with respect to ground (AUC_G) were calculated. Four separate linear regressions were computed to examine the relationship of antenatal corticosteroids and overall stress to each of the 4 cortisol parameters, while controlling for the women's gestational stage during their cortisol assessment. In addition, the relationship of three stress symptom clusters (emotional distress, inability to cope with stressors, and negative frame of mind) were examined for their relationship to each cortisol parameter.

Results: Women who received antenatal corticosteroids had lower average cortisol (b=-.297, p=.01). Greater perceived stress was associated with more blunted cortisol slopes across the day (b=-.34, p<.05), with emotional distress being the underlying stress symptom cluster having the strongest effect size (b=-.32, p<.05). Findings suggest that antenatal corticosteroids may contribute to dysregulation of women's HPA activity during pregnancy and that specific stress symptoms may be more salient for women's cortisol dysregulation than others.

Implications for Further Research: Longitudinal assessments over the course of gestation are needed to better understand how specific stress symptom clusters may affect cortisol at specific time points during pregnancy. Assessment of specific stress symptoms may be a more sensitive indicator of intervention need. Further research is needed to determine long term impact of antenatal corticosteroids on women's regulation of cortisol. Findings suggest that clinicians may want to carefully weigh the costs and benefits of prescribing corticosteroids.

Funding: The National Institute of Child Health and Human Development (Weiss, R01 HD081188-05) and the National Institute of Nursing Research T32 Biobehavioral Research Training Program in Symptom Science (NR016920).

THE JEDI WAY: ORGANIZATIONAL INITIATIVES TO TRANSFORM A SCHOOL OF NURSING

Overview: The JEDI Way: Organizational Initiatives to Transform a School of Nursing

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Purpose: This symposium offers insights for how a commitment to justice, equity, diversity, and inclusion (JEDI) motivates nursing school organizational change. Recognizing that conventional ways of operating are structural manifestations of marginalizing and oppressive systems that concentrate power and advantage for majority identities, novel propositions are needed for abolishment of institutionalized prejudice and discrimination. Featured presentations exemplify efforts to conceptualize and execute initiatives that challenge higher education traditions and customs which hinder achieving JEDI.

Background: Our present inflection point in history compels nursing schools to engage in self-examination about legacy and present-day forms of institutionalized injustice and inequity at work in their settings. Against the societal backdrop of reckoning with racism and other intersecting systems of oppression, our school has embarked on intentional reflection about what we are doing (or not) to either perpetuate or counter conditions in nursing education and research that serve to intensify or ameliorate health inequities. A focal area of this endeavor emphasizes fostering an organizational climate that values diversity of identity and lived experience to inform how we approach academic training and research to fulfill nursing's responsibility to health equity.

Undertaking: Prompted by our university's Diversity Blueprint, our school crafted a Diversity, Equity and Inclusion Strategic Action Plan in 2016 that asserted the need to recruit and retain individuals who would contribute to the diversity of our faculty, staff, and student body, as well as equip them with knowledge, skills, and strategies to disrupt bias and discrimination that disproportionately harm populations with marginalized identities. Moreover, these innovative and courageous initiatives for organizational transformation are in direct alignment with national declarations of nursing's role through education, research, and practice to advance health equity; as in the Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity, American Association of Colleges of Nursing's new Essentials, and National Institute of Nursing Research's draft 2022-2026 Strategic Plan.

Outcome Achieved: This symposium highlights four initiatives in our school that illustrate efforts to break free from policies, procedures, and practices that discount the interests and well-being of individuals and groups with marginalized identities. The first describes how health equity can serve as a theme to facilitate cluster hiring of underrepresented nurse scientists and educators. The second illustrates a multi-school/college partnership coalition, premised on the Public Health Critical Race Praxis model, to implement best practices and pool resources to support recruitment and retention of health professions scientists from underrepresented racial/ethnic groups. Third, we describe the equity-centered process used to develop an educational intervention to interrupt implicit bias among nurses in clinical settings. Lastly, we explain how restorative justice can be used by faculty as an operational framework to promote accountability and cultivate safe learning environments for students.

Conclusion: This symposium hopes to inspire participants to realize what can be rather than simply ponder what should be, so stated commitments to JEDI are not merely performative. Schools, colleges, and programs of nursing must be willing to boldly question and reimagine current ways of operating in order to espouse the JEDI way.

THE JEDI WAY: ORGANIZATIONAL INITIATIVES TO TRANSFORM A SCHOOL OF NURSING

Cluster Hiring on a Health Equity Platform to Diversify Faculty Demographics

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Purpose: The University of Washington School of Nursing devised a strategic initiative to diversify the demographic profile of its faculty. We present a multi-faceted approach to enhance recruitment of nurse scientists and educators from underrepresented groups.

Background: Historical lack of diversity among nursing faculty, particularly at research intensive institutions, persists despite increasing representation of students of color and gender identities applying to, matriculating in, and graduating from academic nursing programs. Students are increasingly calling for educators, mentors, and researchers who represent the variety of lived experiences they can relate to, as well as reflect the increasing diversity of patient/client populations they will care for. For example, an estimated 60% of the U.S. patient population identifies as being of color, yet less than 20% of registered nurses do. Furthermore, the responsibility for nurses to play meaningful roles in reducing health disparities, of which marginalized groups bear disproportionate burden, compels nursing schools to offer learning experiences informed by a variety of cultural lenses and oriented to achieve health equity.

Undertaking: The Department of Child, Family, and Population Health Nursing committed to a cluster hiring approach utilizing multiple strategies to increase diversity in filling tenure-eligible track and teaching track faculty vacancies. Cluster hiring is a deliberate method of recruiting applicants who have a shared identity and interest, which then creates a natural professional and social support structure for the course of their careers. Guided by best practices, targeted university funding opportunities, and nationally-articulated priorities, we implemented a systematic process to build organizational capacity for faculty candidate recruitment and evaluation that aligns with our justice, equity, diversity, and inclusion priorities.

Outcome Achieved: Outcomes spanned completion of faculty development training on hiring best practices, along with coaching on how to design and carry out a cluster hiring initiative that included development of a targeted job advertisement, new marketing techniques, and real-time monitoring of aggregate applicant demographics. Leveraging the *Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity* report as a thematic platform, advertisements emphasized our desire to fill open tenure-eligible and teaching track positions with scholars whose research and teaching are demonstrably committed to health equity. An application review rubric, with criteria explicitly linked to health equity concepts, was developed in collaboration with faculty at-large to facilitate engagement in the process. Beyond recruitment and hiring, mentorship structures to support incoming faculty from underrepresented groups were created for positive transition into university and community milieu.

Conclusion: A cluster hiring approach offers structural means to purposefully break free from traditional ways of conducting faculty searches that perpetuate biased decision-making that replicates and deepens current dominant demographic identities. This undertaking requires training and capacity development of search committees and faculty to ensure the integrity and fulfillment of the cluster hiring approach, along with articulation into supports for incoming faculty. Moreover, grounding open faculty positions into the theme of health equity inspires interest among prospective applicants more likely to have shared identities with those from marginalized, underrepresented groups, thereby diversifying the nursing faculty workforce.

THE JEDI WAY: ORGANIZATIONAL INITIATIVES TO TRANSFORM A SCHOOL OF NURSING

Anti-Racist Approaches to Faculty Recruitment, Retention, and Promotion

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Purpose: To transform institutional policies, practices, and norms that continue to limit the recruitment and retention of underrepresented racial and ethnic (URE) faculty in nursing.
Background: A diverse scientific workforce is critical for advancing discovery and innovation to promote and protect population health, including rectifying health disparities. Traditional recruitment and retention efforts have not produced increases in the number of biomedical and nurse scientists from URE backgrounds (i.e., Black/African-American, Native Hawaiian/Pacific Islander, American Indian/Alaska Native, and Hispanic/Latino/a) needed to achieve representation and parity. This underrepresentation remains despite robust diversity, equity, and inclusion (DEI) efforts. These efforts, however, have not been anti-racist; they have not explicitly named nor disrupted institutional policies, practices, and elements of culture that align with white supremacy culture norms. White supremacy culture norms perpetuate institutionalized racism by preferencing whiteness, thereby limiting opportunities and producing barriers for URE faculty success.
Undertaking: Our school of nursing embarked on an anti-racist approach to identify, challenge, and change policies, practices, and norms that produce racial/ethnic inequities within our research, teaching, and operations. As an entire faculty, we are working to execute identified changes. The University of Washington's (UW) submission to the NIH Faculty Institutional Recruitment for Sustainable Transformation (FIRST) funding mechanism provided an opportunity to advance our work by incorporating critical race theory principles within our approaches to promote faculty diversity.
UW FIRST, led by nine URE faculty and faculty of color, is an intra-institutional collaboration between the Office of the Provost, Schools of Medicine, Nursing, Public Health, and Social Work, and the College of Engineering. Informed by Public Health Critical Race Praxis (PHCRP), UW FIRST acknowledges the ordinariness of racism and need to place the expertise and lived experience of URE faculty at the center of our discourse and decision-making to drive change. Participating units will implement and evaluate URE faculty-identified anti-racist strategies to disrupt white supremacy culture norms that preference whiteness within faculty recruitment, development, retention, and promotion policies, practices, norms, and structures.
Outcome Achieved: UW FIRST anti-racist strategies include mandatory anti-racism training for faculty search and promotion review committees; structured job ads and faculty search review rubrics that prioritize health disparities research and anti-racist approaches to research and teaching; promotion criteria that value anti-racist approaches in research and teaching; anti-racist faculty development and mentoring structures that leverage senior faculty as mentors and sponsors; and faculty peer-learning to disrupt behaviors that preference whiteness. Additionally, each school/college redirected significant fiscal and personnel resources for hiring a diverse cohort of health sciences scholars and establish an integrated and supportive structure to foster opportunities and a nurturing climate for them to thrive.
Conclusion: UW FIRST is congruent with organizational change theory requiring simultaneous and multi-level strategies to shift individuals and their work as well as organizational norms, values, policies, and practices to facilitate transformation towards inclusive excellence. Development of UW FIRST coalesced and synergized ongoing innovation and action to diversify faculty and promote critically needed health disparities research across the translational science spectrum within our school of nursing and across the UW.

THE JEDI WAY: ORGANIZATIONAL INITIATIVES TO TRANSFORM A SCHOOL OF NURSING

Using an equityXdesign Approach to Develop the Implicit Bias Clinical Teaching Program

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Purpose: The purpose of this project was to center equity in the iterative and collaborative development of the Implicit Bias Clinical Teaching Program (IBIAS). IBIAS is a multi-faceted, evidence-based program that conceptualizes implicit bias among nurses as an urgent patient safety issue and seeks to effectively address 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.

Background: Implicit bias among nurses and other health care providers is a critically important problem to solve because substantial evidence shows that patients receive differential treatment across numerous areas of healthcare, resulting in poorer healthcare experiences and outcomes based on race, ethnicity, and other marginalized identities. Evidence also shows that individuals from marginalized communities (e.g. the Black/African-American and LGBTQ+ communities) often avoid seeking preventive health services out of fear that they will be treated poorly and/or discriminated against in their care. To our knowledge, no program or strategy exists to engage and prepare future nurses to address this problem in the clinical setting.

Methods: IBIAS was developed iteratively and collaboratively from August 2020 – September 2021 using equityXdesign principles that center racial equity in the design thinking process (e.g. wide engagement, ensuring enough time for equitable design, designing for the margins, ceding power). Approximately 30 stakeholders participated in this process representing diversity in levels of role/power (students, staff, clinical instructors, teaching and tenure-track faculty, School of Nursing leadership, community members) and in racial, ethnic, sexual, and gender identities and lived experiences. Elements of IBIAS, particularly examples impacting marginalized communities in the clinical setting, were guided by members of marginalized communities and iteratively refined during monthly meetings. Iterative development also focused on the need for simple integration into clinical nursing courses that requires minimal time/resources and no prior experience addressing implicit bias.

Outcomes: IBIAS stakeholders developed a guided imagery student simulation (to provide a safe environment for students to explore how their own biases can negatively impact the care they provide), a clinical instructor guide (to provide information necessary to implement IBIAS into an existing clinical courses, including Learning Management System integration), and an Assessment of Student Skills to Interrupt Bias Form (to guide student demonstration of 10 specific bias-interrupting skills during the clinical course, including skill definitions and demonstrated examples in the clinical setting).

Conclusions: Using equityXdesign principles in the development of nursing curriculum or other program elements is one approach to center racial and health equity considerations and greatly widen the circle of voices driving the design process and related outcomes. Additional research is needed to explore the feasibility and impact of integrating IBIAS in undergraduate clinical nursing courses. Continued engagement from a wide and diverse stakeholder group are required if curriculum and/or programs are to effectively meet the needs of marginalized communities that are disproportionately impacted by implicit 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.

Restorative Justice to Promote Accountability for Student and Faculty Well-Being

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Purposes/Aims: The nurse-midwifery Doctor of Nursing Practice (DNP) program piloted the use of a Restorative Justice process within at the University of Washington (UW) School of Nursing to promote accountability and create healthy, safe learning environments for students within our program, with the intent to expand this process as an operational framework across the entire School of Nursing.

Rationale/Background: In recent years, the UW School of Nursing has begun to acknowledge harm from institutional structures and practices to students, staff, and faculty of marginalized identities, particularly those experiencing racism. The use of a Restorative Justice framework creates an avenue for all involved (students, staff, and faculty) to be heard, their voices valued, and their experiences of harm or impact acknowledged, moving towards an environment of healing, accountability, and transformation. The use of Restorative Justice within an academic setting promotes accountability and increases connections between faculty colleagues and within leadership. Restorative Justice also sets the stage for changing a culture that values hierarchy and exclusion, common manifestations of institutional racism in higher education and nursing schools. The faculty in the nurse-midwifery DNP program at the UW School of Nursing piloted a Restorative Justice process as a way to acknowledge harms experienced by students and create an environment where these harms could be heard and a restorative process initiated without defensiveness and with care.

Undertaking: Using Restorative Justice as an operational framework, the nurse-midwifery DNP program invited an outside facilitator to support the program in instituting a Restorative Justice practice. Initially, circles were supported within the nurse-midwifery faculty to create trust and connection and later support accountability for harms that have taken place within the program and larger School. A plan was developed to create opportunities for students, alumni, and community members to share their experiences with the program, to further support accountability for harms not understood or acknowledged. Meetings were scheduled for students to share their experiences with our facilitators, with the intent for students to determine what will be needed to support healing and promote change. Additionally, public letters were sent to alumni and community stakeholders to inform them of the plan and to invite them into the restorative justice process.

Outcomes: Instituting a Restorative Justice process within the nurse-midwifery DNP program has demonstrated increased trust between faculty, staff, and students and created opportunities for students to share their experiences in a supported way. Students engaged in the process have shared an increased comfort with sharing about harm and impact with their faculty, with the understanding that their experiences will be taken seriously and will stimulate changes within the larger structures of the program and School.

Conclusions: The successful use of Restorative Justice within the UW nurse-midwifery DNP program provides evidence that larger implementation of this process across the larger School of Nursing could serve to better support historically excluded students, staff, and faculty and may create the momentum to support needed institutional change.

WORKING AS A NURSE DURING THE COVID-19 PANDEMIC: CONSIDERATIONS FOR OUR FUTURE WORKFORCE

Overview: Working as a Nurse during the COVID-19 Pandemic: Future Workforce Considerations

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Purpose/Aims: The purpose of this symposium is to describe the experience of working as a nurse during the COVID-19 pandemic across the United States.

Background: Since March of 2020, the COVID-19 pandemic has impacted the nursing workforce in unparalleled ways within the United States, including the death of over 1150 nurses. Research is needed to elucidate understanding of nurses experiences working during the COVID-19 pandemic in order to develop strategies to assist the future nursing workforce.

Methods: Three studies focused on working as a nurse during the COVID-19 pandemic across the United States will be presented. The first is a convergent mixed methods study on the work-related well-being of young adult nurses, and the second is a qualitative descriptive study on the experiences of critical care nurses from a work systems perspective. The third is a qualitative descriptive study of nurses' experiences working during the COVID-19 pandemic.

Results: Across our studies, nurses in the United States are struggling as the COVID-19 pandemic continues. Regardless of age, years of experience, or setting, nurses are enduring negative consequences from the turbulent nature of the ongoing COVID-19 pandemic. This includes but is not limited to suboptimal well-being, burnout, and for some leaving their positions. Rationales for these negative consequences include lack of adequate resources or support and an overall loss of trust in their healthcare organizations. Furthermore, nurses describe experiencing morally traumatic events almost daily in their practice.

Implications for Translation to Practice/Further Research/Policy: The COVID-19 pandemic magnified weaknesses within the American healthcare system that existed pre-pandemic. Nurses in our studies described the negative impact of the pandemic on their own health, well-being, and intention to stay in their current roles. The nursing pipeline has been an ongoing issue and increasing the number of nurses will not mitigate the negative impact of the pandemic on existing nurses. Healthcare systems and policymakers should address system deficiencies related to resources, support, and leadership and management with evidence-based strategies. Moreover, the gaze of healthcare systems and policymakers should address nurses' mental health and well-being, creating safe work environments, and addressing underlying systemic issues that the pandemic has exposed. Future research is needed to examine the long term impact of COVID-19 on the nursing workforce.

Funding: Sigma Theta Tau Beta Mu Student Research Grant

Young Adult Nurse Work-Related Well-Being during the COVID-19 Pandemic

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Purposes/Aims: To describe and examine the type and significance of factors significantly related to young adult nurse work-related well-being.

Rationale/Conceptual Basis/Background: Nurse well-being has been identified as a significant factor in health systems outcomes. Young adult nurses, those who are under the age of 30, have the lowest work-related well-being, highest turnover intentions, and lowest overall job satisfaction across practicing nurses.

Methods: A convergent mixed methods design.

Results: Out of 110 young adult nurses surveyed, 67% percent had suboptimal work-related well-being. Initial regression analysis demonstrated that resilience, Magnet® designation, perceived similarities in practice worldviews with co-workers of a different age, and COVID-19 explained 38% of the variance in young adult nurse work-related well-being. With resilience removed, the regression analysis demonstrated that nurses' contemporary practice worldview, co-workers' practice worldviews of different age, managers' practice worldviews, and COVID-19 explained 31% of the variance in young adult nurse well-being. Content analysis supported three distinct categories, 1) the contemporary practice worldview, 2) the moral dimensions, and 3) facilitators and inhibitors. Mixed methods metainferences generated nuanced understanding about young adult nurse work-related well-being beyond what was possible with either qualitative or quantitative methods alone.

Implications for Translation to Practice/Further Research/Policy: Young adult nurses demonstrated an increased rate of suboptimal work-related well-being compared to previous research, placing them at an increased risk for burnout, fatigue, patient care errors, and intent to leave in the next 24 months. The moral dimension of nursing should be considered as especially relevant to young adult nurse work-related well-being, as are the nurse's contemporary practice worldview and perceived similarities with co-workers' and managers' practice worldviews. Future research is needed to further understand the moral dimensions of young adult nurse work-related well-being.

Funding: Sigma Theta Tau Beta Mu Chapter Student Research Grant

From the Frontlines: A Qualitative Study of Critical Care Nursing during COVID-19

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Purposes/Aims: To describe the impact of the COVID-19 pandemic on nursing care delivery in critical care throughout the United States (US) from a work systems perspective.

Background: Many patients admitted to the hospital with COVID-19 require critical care. At the time of this study, little research evidence existed describing the impact of the COVID-19 pandemic on US critical care settings (work systems), nursing care delivery, and subsequent outcomes from the perspective of nurses. Knowledge from this study created a foundation upon which leaders can redesign critical care settings from a work systems perspective to better meet the needs of patients and nurses who work in them.

Methods: This qualitative descriptive study was guided by the Systems Engineering Initiative for Patient Safety Model (SEIPS) 2.0 model, which describes the relationships between healthcare work systems, processes, outcomes, and adaptations. Interview transcripts were analyzed using a combined deductive and inductive content analysis approach.

Results: Twenty critical care nurses with at least two years' experience in critical care who worked for at least six months during the COVID-19 pandemic were recruited online and interviewed one-on-one. All areas of the critical care work systems required adaptation during the pandemic; however, critical care nurses took on the majority of the adaptation. Deductive categories were organized by each of the concepts of the SEIPS 2.0 model and describe the critical care work system during COVID-19, the processes of nursing care delivery, and outcomes. The deductive adaptation category revealed three inductive themes: patient care, creativity, and (nurse) coping. Inductive results reveal a description of the COVID-19 wave progression, fear, lack of trust in the organization, supernurse culture, and external environment outcomes.

Implications for Translation to Practice/Further Research: Critical care nurses took on the majority of adaptation in the critical care work system to avoid impacts on patients. This impacted their well-being, and as a result, critical care nurses need immediate and ongoing support from organizations. These findings have implications for organizations to share the responsibility of adapting the critical care work system with critical care nurses. Critical care work system redesign is needed to avoid negative impacts on nurse well-being which is inextricably linked to patient and organizational outcomes.

Funding: Sigma Theta Tau Beta Mu Dissertation Grant

WORKING AS A NURSE DURING THE COVID-19 PANDEMIC: CONSIDERATIONS FOR OUR FUTURE WORKFORCE

It's Been a Roller Coaster:
Experiences of Nurses Working during the COVID-19 Pandemic

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Purposes/Aims: The purpose of this study was to describe the experiences of nurses working during the COVID-19 Pandemic.
Rationale/Conceptual Basis/Background: The COVID-19 pandemic has gripped the country and the healthcare work environment. Nurses, and those who work in healthcare settings have faced new challenges that are rapidly changing. Collecting stories from providers during this pandemic will illuminate the challenges that need to be addressed in our healthcare system, how healthcare systems can support these workers during and after the pandemic and learn from their experiences to improve future preparedness.
Methods: A qualitative descriptive study of nurses' experiences working across the United States during the COVID-19 pandemic collected via confidential voicemails left on a secure phone line, with option to email. This presentation will present the thematic analysis of voicemails (n=55) collected from September 2020 - September 2021.
Results: The majority of participants worked in inpatient/acute care settings. Participants' experiences working during the COVID-19 pandemic were both positive and negative. Themes identified as positive experiences included pride, support, opportunities to change nursing positions, as well as the arrival of the COVID-19 vaccines. Many participants felt proud of how they and their coworkers pulled together to overcome the challenges of the pandemic while still providing great patient care. The pandemic posed opportunities for new job positions and roles, and the arrival of the COVID-19 vaccines had provided hope and encouragement. The themes identified as negative experiences included lack of managerial and organizational support, staffing shortages, lack of resources, feelings of fear and anger, patient deaths, and negative impacts on family life. Most participants described how the lack of resources (i.e., personal protective equipment), lack of clear guidelines from managers and healthcare systems, and staffing shortages led to suboptimal patient care and caused frustrations, anxiety, and anger. The participants experienced the moral dilemma of patients not being provided the care they needed. The lack of visitors in both acute and long term care left patients isolated which promoted feelings of depression in the participants and their patients. Both extended work hours as well as decreases in work hours affected the participants' family life financially, promoted stress and anxiety, and some participants considered leaving the nursing profession. Moreover, there was a general awareness of the transitional nature of the positive and negative experiences of working as a nurse during the COVID-19 pandemic, similar to a roller coaster.
Implications for Translation to Practice/Further Research/Policy: The shifting landscape of the COVID-19 pandemic led to a variety of positive and negative experiences for providers, health care settings, and patients and families. While participants were overwhelmingly hopeful about the vaccines, the subsequent surges, misinformation about the vaccine, and staffing shortages has and will continue to impact the health and well-being of nurses and their turnover intention. Healthcare systems and policymakers should address the systems issues (e.g., staffing) magnified during the pandemic and provide easily accessible mental health resources.

ABSTRACTS OF PODIUM PRESENTATIONS

Physiological Effects of Handling in Infants Receiving Neonatal Intensive Care

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Background: In the United States, preterm births account for 10.8% of all births, with approximately 82% being moderate to late preterm (32-36$^{6/7}$ weeks' gestation). Providing a thriving environment to premature infants receiving care in the neonatal intensive care unit is an ongoing area of interest to all stakeholders interested in infant health. With advances in monitoring technology, there are new methods to assess the effects of care and handling events on premature infants.

Purpose: To describe the effects of routine procedures on renal and cerebral oxygen perfusion that may have the potential to lead to adverse outcomes.

Methodology: Descriptive design using prospective observation was utilized and was conducted in the neonatal intensive care unit at a Magnet® designated acute care hospital. Moderate-late term premature infants were observed for a continuous maximum six-hour period capturing two consecutive care episodes. Moderate to late preterm infants were monitored by near-infrared spectroscopy and pulse oximetry. The handling events were logged into a time-stamped observation procedure log in Excel, and demographic information was collected.

Result: The data were analyzed using analysis of variance (ANOVA), Kruskal Wallis, and multiple linear regression models. The results of this study found that reductions in cerebral and renal oxygen saturation were significantly greater in neonates exposed to clustered care procedures than procedure performed individually. Similar results were also found with systemic oxygen saturation and heart rate. Additionally, clustered procedures that contained a potentially painful tissue-damaging procedure produced near identical changes in cerebral, renal, and systemic oxygenation and heart rate compared to clustered procedures that did not include a potentially painful procedure.

Implications: The results suggest that care delivery to premature neonates may need to be modified. These results may prompt nurses to change methods of routine care by allowing the infant to rest between intrusive procedures and utilizing methods of providing comfort during care.

Conclusion: It is evident from the results of this research that infants are impacted more by the quantity or length of procedures, as in clustered procedures, than they are by single procedures, whether the clustered procedure contains a potentially painful tissue-damaging procedure. The study results reveal that when exposed to repeated stimuli, as what occurs during clustered procedures, premature infants are unable to maintain physiologic balance increasing the risk for decompensation.

Influence of Birth Location on Feeding Type at NICU Discharge

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Purpose/Aim: The purpose of this study was to investigate the relationship between place of birth (hospital, home, birth center) and frequency of mother's milk feedings at time of discharge from a level IV Neonatal Intensive Care Unit (NICU).

Background: Consumption of mother's milk has numerous physical and psycho-emotional benefits for both mom and baby. Previous studies have found that term infants are more likely to be breastfed if they were born outside of a hospital (birth center or home). However, barriers exist that may make consumption of human milk difficult for babies admitted to the NICU.

Methods: This study is a comparative descriptive secondary analysis of data from the Children's Hospital Neonatal Database (CHND). This dataset was developed by the Children's Hospital Neonatal Consortium to monitor metrics related to quality and patient outcomes in level IV NICUs. The current investigation used data from a single level IV NICU in the western United States that contributed data to the larger CHND dataset. The infants analyzed in this study had a variety of serious medical and surgical conditions that warranted intensive care. This study only analyzed data from infants who were greater than 7 days of life and had a gestational age of 34-42 weeks. Infants who were discharged home prior to admission, died prior to discharge, or who had a length of stay longer than 60 days were excluded. The relationship between birth location and feeding type was compared between infants who were born in the Maternal Fetal Care Unit (MCFU) that was connected to the NICU (n=537), outside of MFCU in another hospital setting (n=1036), at home (n=25), and in a birthing center (n=10).

Results: Ninety-six percent of the infants that were born in a birthing center or at home were discharged from the NICU receiving exclusive mothers milk feeds compared to 72% of infants who were born in a hospital. The chi-squared analysis showed a statistically significant difference between birth location and feeding type (p=.0021).

Implications and Further Research: Mothers who gave birth in a birthing center or at home were more likely to provide their child with the more natural feeding option of human milk in lieu of formula. The desire to give birth in more natural, less medicalized settings outside of the hospital, such as at home or in a birth center, may predispose mothers to pursue a more natural feeding type for their infant. This study's findings suggest that the infant's need for intensive care did not dictate feeding type at time of NICU discharge. Instead, what more likely determined the feeding type at time of discharge was the mother's preference. This study did not have a prospective design, a prospective study could be utilized in subsequent investigations. Future research that investigates whether patient acuity and multiparous women's breastfeeding experiences are covariates in the relationship between birth location and feeding type also would be beneficial.

Pattern Typologies of Hope in Advanced Cancer

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Purpose: Describe patterns of hope in adolescents and young adults (AYAs) across their experiences with advanced cancer.

Background: Hope is the belief in a goal which motivates behaviors, and provides mental sustenance for AYA's while receiving advanced cancer treatments, yet how hope is fostered in AYAs remains understudied.

Methods: 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. Semi-structured interviews (2 interviews per participant) were performed virtually via Zoom using the Relational Caring Inquiry as a framework for data collection and analysis. Newman's Theory of Health as Expanding Consciousness provided a theoretical foundation for the study. In the first interview, participants described hope through open ended interview questions. Participants were asked to create an illustration of hope and narrate the meanings and temporal events in their illustrations. Participants drew lines or pictures to portray their experiences with hope based on their artistic preferences. The data from the first interview was compiled into a narrative. At the second interview, the participant and the PI reviewed the co-created narratives of hope, and further reflected on the meaning of their illustration of hope. Inductive thematic data analysis was completed with the co-created narrative texts. Data from the narratives, illustrations, and participants' explanations of their meanings were integrated to identify typologies of hope in this sample.

Results: Participants included fifteen AYAs aged 12-21 years diagnosed with advanced hematological (80%) or solid malignancies (20%). Most participants experienced a relapse (67%) or received a Bone Marrow Transplant (53%). Participants were either actively receiving treatment (47%) or in remission during data collection. Ten of the fifteen participants drew linear patterns to depict their experiences with hope, the other five participants drew pictures instead. Participants' levels of hope fluctuated based on their lived experiences from cancer treatment, treatment-related side effects, and social structure changes. Pattern typology similarities included 1) levels of hope oscillated upward and downward in zig-zag patterns; 2) hope increased during initiation of new treatment regimens; 3) hope decreased during treatment failure, relapse, or hospital re-admissions; and 4) hope decreased during the COVID-19 pandemic onset. Pattern typology similarities emerged based on their visual appearance and participants' descriptions of temporal events. Interestingly, nine of the ten patterns depicted the participants' current state of hope greater than their baseline hope at time of cancer diagnosis, with the exception of one participant, a person who experienced a new metastasis with severe complications. These findings match the concepts of pattern fluctuation and re-organization at a higher level with expanded consciousness in Newman's Theory of Health as Expanding Consciousness.

Implications for Translation to Practice/Research/Policy: Nurses may use drawing to engage AYAs in dialogue about hope and its motivating factors. Identifying typologies of hope may help nurses understand when AYAs who have advanced cancer may experience higher levels, plateaus, and nadirs in their levels of hope, and identify when additional support is needed to prevent distress amidst fluctuations in their levels of hope.

Understanding the Long-Term Relationship of the Live Liver Donor Dyad

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Purpose: The purpose of this study was to better understand how this dyad makes sense of the parental live liver donation from the time of the donation to the time the recipient reaches adolescence.

Background: Living donor liver transplantation serves as a viable option to parents when faced with a child with end stage liver failure. As we enter the third decade of performing living-related liver transplants in the pediatric population, very little research is available that addresses how this type of donation shape parental/adolescent relationships over time. This focused ethnographic study embraces features of the "sense-making" process to better understand how the parental live liver donor and pediatric recipient dyad adapt and adjust as they move through the transplant continuum.

Methods: A focused ethnographic design with symbolic interaction framework as in the sociologic tradition was used to understand the meanings the dyad created as they made sense of their life journey as organ donors and recipients. Semi-structured interviews were conducted with 12 adolescent young adults (AYA) and their respective parental liver donor.

Results: Using thematic analysis this study reveals three categories that describe how the dyad makes sense of the transplant through connections, reflections, and life transitions. The overarching theme reflects that this cohort of dyads, reached a shared understanding of gratitude for this gift of life.

Conclusion and Implications for Translation to Practice: Parents whose child needs a liver transplant are faced with a decision between waiting on a national registry list for a deceased donor or opting for a live living donor transplant. Studies such as this one can help guide and inform parents when making difficult life-changing decisions about their child. The AYA can also benefit from this new knowledge as they can gain a broader view and mindset into this life saving event as they transition to adulthood.

Funding: Stanford School of Medicine Clinical Educator Grant 2019

Interprofessional Outreach to Provide Rural Traineeship and Improve School Readiness

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Purpose/Aims: Improving access to care in provider shortage areas is critical in helping communities meet federal Head Start requirements, in assuring young learners are ready for pre-school, and in providing future nurses with transformational clinical experiences.
Background: A rural, American Indian (AI) community in Montana with a dental professional shortage designation is the site of this program. At inception, the Head Start was in deficiency status for student health screening requirements.
Methods: An interprofessional nursing and dental hygiene team provided three classroom visits per year to provide screenings and preventive dental services to 3-5-year-old Head Start students in eight classrooms. Baccalaureate nursing students, a nursing faculty, and two limited access permit dental hygienists composed the outreach team. Orientation to the mobile screening equipment, the procedure for applying fluoride varnish and for charting oral health assessments was provided the night before the rural clinical experience.
Results: Head Start students in a rural, American Indian setting were screened for height, weight, blood pressure, hearing, vision, and oral health. Over the three years (2018 – 2021) of the project, 79 undergraduate nursing students traveled 490 miles to participate in this rural outreach experience. Preventive oral health interventions for the same time period included 277 cleanings, 228 fluoride varnish applications, and 808 sealant placements. The rate of untreated caries in this sample was 33.8% compared to 43.4% in AI/AN 3-5-year-olds nationally. Decay experience in this sample was 58.0% compared to 71.8% nationally. We referred 139 out of 414 children screened to follow-up dental care (33.6%) and with active case management, the time to treatment was 174.7 days (*sd* = 133.9) for the 108 students who completed their referral (77.8%).
Implications: Interprofessional mobile outreach to high-priority, rural settings is an example of team-based care relevant to contemporary healthcare delivery models. This ongoing service-based learning experience is an efficient way to educate future nurses in rural and primary care, develop team-based competencies, reduce pediatric oral health disparities in underserved communities, and assure preschoolers are ready to learn.

Funding: Research was supported by HRSA NEPQR UK1HP31719, HRSA 18-014, Otto Bremer Trust, Dennis & Phyllis Washington Foundation and Blue Cross Blue Shield

Exploring the EHR As a Communication Channel That Influences Nursing Workflow

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Purpose: Nurse's interface with the EHR to obtain patient data and information to implement into workflow to assist in meeting patient needs. The hypothesis proposed that the nurse interfaces with the EHR, searches for usable patient data and information, processes patient data into information that can be communicated and implemented into workflow. Of particular interest was the comparison of two nursing role perspectives of a patient experiencing a clinical event (CE).

Background/Theory: The current EHR is ineffective as communication channel to display patient data and information that can be easily and timely implemented into workflow. Shannon's Information Theory was used as the underpinning conceptual theory which analyzed the EHR as a communication channel to access, retrieve and process patient data to communicate patient needs.

Methods: The study explored 9 responding nurses (RSRN) and 11 receiving nurses' (RCRN) described perspective. The study sought to explore how nurses accessed and processed patient data and information from the EHR for the purpose of communication. Semi-structured interviews using a qualitative descriptive approach were used during data collection. Participant answered questions on basic age demographics, years of experience, years of experience working with current EHR, name of current EHR, highest nursing degree, length of service on current medical/surgical unit, and number of beds on medical/surgical unit. Participants were asked 5 questions. These 5 questions asked the participant to describe their perspective of areas accessed within the EHR, how the nurse processed the patient data and information after access, what strengths and limitations did their current EHR have, and what suggestions or recommendations to inform a redesign of the EHR.

Results: Content analysis and inductive approach were used to analyze data for themes. Data was abstracted and reduced to a total of 32 thematic unit categories. Main differences in role were not seen in areas accessed in the EHR, more the "time" the receiving nurse (RCRN) had to decipher and determine what patient data and information to use for communication. Whereas, the responding nurse (RSRN) frequently complained of "too much data to filter through," or "not enough time to get all things completed." However, of interest was how, where and what patient data and information was processed by either participant group (RSRN, RCRN). Participants struggled to articulate what processed data and information were, or how the nurses processed the data (cognitive workload) either on nursing notes or a combination of the EHR and other sources. Secondly, was at what interval the participants processed data and information. Hypothesized was that the nurse participant would access the EHR to obtain data and information. This was not correct, many nurses used hand-off or report sheets more than the EHR.

Future Work: "Process" is not linear in this study. "Process" is more fluid and may occur at intervals. Of interest is analyzing the intervals that nurses choose to process data, what methods are incorporated, and then how the nurse processes data and information into communication and implementation?

Older Family Caregivers' Attitudes Towards Digital Health Physical Activity Program

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Aim: To evaluate perceptions and attitudes towards technology features in a digital health physical activity (PA) program among older family care partners of persons with heart failure (HF-FCPs)

Background: High caregiving burden places family care partners (FCPs) at risk for physical function decline, psychological distress, and poor quality of life. Specifically, older FCPs are more vulnerable than younger FCPs because of greater physical and psychological burden, more age-related health care needs, and less emotional and social support. Technology-supported PA has the potential to promote the health and wellness of older FCPs by engaging them in home-based PA interventions. However, there is a gap in research for digital health PA interventions targeting older FCPs. This study focuses on older HF-FCPs because they are an understudied population that is vulnerable to their own health-related issues.

Methods: A qualitative descriptive study design was used to identify older HF-FCPs' perceptions about digital health technology features, including virtual PA coaching via video-conferencing, fitness tracker, and motivational text messages, in a technology-supported PA program. This study took place at the outpatient Advanced Heart Failure Clinic at the University of Colorado Hospital January-April 2021. We conducted semi-structured, one-on-one interviews with HF-FCPs via phone. The qualitative data were analyzed based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model using directed content analysis methods.

Results: Thirteen qualitative interviews were conducted. Mean age was 66.9±13.4 years; 85% were female, 92% were White and 31% identified as Hispanic. All but one participant was a spouse. Older HF-FCPs' perspectives varied about digital health technology components within each predictor in the UTAUT model (perceived ease of use, perceived usefulness, facilitating conditions). The majority of participants perceived video-conferencing, and fitness trackers, as easy to use and useful and some had used a fitness tracker (e.g., Fitbit, Apple/Samsung watch). Older HF-FCPs reported that they used video-conferencing (e.g., Zoom) more often during the COVID-19 pandemic to interact with their family and friends. Some participants perceived motivational text messages as not useful in motivating PA. Facilitating conditions in the UTAUT model included motivation to health management, fit in lifestyle, technology proficiency, and technology support. Moreover, participants' age and experience with technology (e.g., Zoom, Facetime, Fitbit) as moderators influenced ease of use and usefulness of the technology features in a digital health PA program.

Implications: Participants in this study were predominantly White. Future studies should focus on identifying perceptions and attitudes towards digital health technology to improve their health in a racially and ethnically diverse population of older HF-FCPs. Our findings demonstrated that technology proficiency, technology support, and experience with technology are modifiable variables for facilitators to engage older HF-FCPs in a technology-supported PA program; thus, ongoing technology training for older participants is warranted for sustained engagement. Moreover, future studies should optimize usability and acceptability of the digital health PA program through iterative processes and identify implementation barriers and concerns about security and privacy among older HF-FCPs.

Funding: Startup funds from the University of Colorado College of Nursing

It Is Feasible to Implement the Mobile Intervention in College Students?

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Background and Purpose: Hypertension is a known risk factor that accelerates and leads to cardiovascular disease. While it is often a risk factor recognized in middle-aged and older adults, it is overlooked in young adults. The purpose of this study was to (1) implement a mHealth intervention, the **O**ptimize **B**lood Pressure **I**mprovement (**MOBI**LE) intervention, in college students, aged 18 to 29 years, with elevated blood pressure (BP); and (2) test its feasibility and impact on BP reduction (primary outcome) along with sodium intake and hypertension knowledge improvement (secondary outcomes) after 28 days. The Fogg Behavioral Model (FBM) guided the intervention.

Methods: The pilot study used a two-arm, randomized controlled trial. Subjects in the intervention group were required to monitor their daily BP. We recruited full-time students who had regular access to a mobile smartphone with unlimited texting and elevated BP or undiagnosed hypertension stage I. We excluded students who were pregnant, lactating, planning to become pregnant during the study, taking antihypertensive medication, or diagnosed with a life-threatening illness or condition associated with hypertension.

We conducted the formative phase before the intervention phase to assess the acceptability, engagement, and feasibility of the intervention motivational text messages. During the educational session for baseline data, all subjects completed a sociodemographic questionnaire, the Automated Self-Administered 24-Hour Dietary Assessment Tool (ASA24), and the Hypertension Knowledge-Level Scale. Following, all subjects' height and weight were also collected to calculate body mass index. For 28 days, subjects in the intervention group provided their daily BP measurement using the Withings wireless BP cuff and their motivational levels (1 for low motivation, 3 for moderate motivation, and 5 for high motivation) to receive the appropriate text message. After 28 days, all subjects were scheduled for an exit interview to collect post intervention data along with an exit interview. The control group completed the educational session and exit interview only.

Results: Twenty-nine participants (intervention: $n = 15$; control: $n = 14$) completed the study. We found a significant decrease in BP in the intervention group ($p = 0.001$) while no statistical significance was found in the control group. Using the ASA24 to extract sodium intake, there was no statistical difference in sodium intake for intervention or control groups. The mean hypertension knowledge score increased in both groups after 28 days; however, the improvement was only significant for the control group ($p = 0.001$).

Conclusions & Implications: The results provided preliminary data on the effect of BP reduction in both groups with more impact on the intervention group. These promising findings warrant further examination of the intervention and its long-term effects.

Funding: Mountain West Clinical Translational Research Infrastructure Network, Pilot Grant

Exploring Healthcare Access Among LGBT Populations: A Pilot Cross-Sectional Study

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Purpose: The purpose of this study was to gather information about the current healthcare experiences and needs of this LGBT population including priority health issues, physical and mental healthcare utilization, and perceived adequacy of LGBT-friendly physical and mental healthcare providers.
Background: There are an estimated 90,000 Lesbian, Gay, Bisexual and Transgender (LGBT) individuals over the age of 14 in Orange County, California. LGBT populations are unique and are known to have significant health disparities, particularly if they are from racial or ethnic groups or have a disability. LGBT individuals are known to experience adverse situations when accessing health care and mental health services, including issues with fear, stigma, discrimination, homophobia. or abuse by healthcare providers, LGBT populations are known to have disproportionate rates of HIV, substance use, adverse childhood experiences (ACE), depression, suicide, and other mental health issues. According to the Institute of Medicine (IOM), there is limited data on the health needs and health care utilization patterns of the LGBT individuals. In Orange County, California, the only information currently available related to LGBT health are HIV incidence and prevalence rates. This is the first known study of this kind in Orange County.
Methods: For this pilot study, a quantitative cross-sectional design was used to obtain data on the health care and mental health care needs and patterns, including access and utilization. Questions were asked using Qualtrics survey (descriptive, cross-sectional). Participants were recruited from two organizations serving the LGBT community, including an AIDS Service Organization and another providing mental health and substance abuse/recovery services. In both groups, the adult clients, age 18 and over, and are known to access health care and mental health services on a regular basis. For the survey, a random sampling method is proposed in order to achieve a representative sample of the LGBT population in Orange County. The organizations emailed the survey link to approximately 2000+ clients. Seventy-five participants completed the online survey.
Results: Findings include trouble finding an LGBT competent provider, delays or being unable to access care, worried about losing insurance. Participants needed to visit multiple different locations to receive care and preferred a one-stop shop.
Implications for Translation to Practice: Nurses in all settings will encounter individuals from the LGBT community. Since this is the first study of its kind in Orange County, the information obtained is invaluable in terms of guiding evidence-informed practice and suggesting measure to improve current standards of care for LGBT individuals.

Findings from this study will nurse better understand the challenges LGBT individuals encounter when accessing healthcare services. Nurse can also identify gaps in available medical and/or mental health services for LGBT populations and assist with developing solutions to improve access and quality of care for members of the LGBT community.

Patient Activation Measure in the Transgender/Gender Diverse Population

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Purpose: The purpose of this research was to determine the psychometric properties of the Patient Activation Measure (PAM) among Transgender and Gender Diverse (TGD) persons.

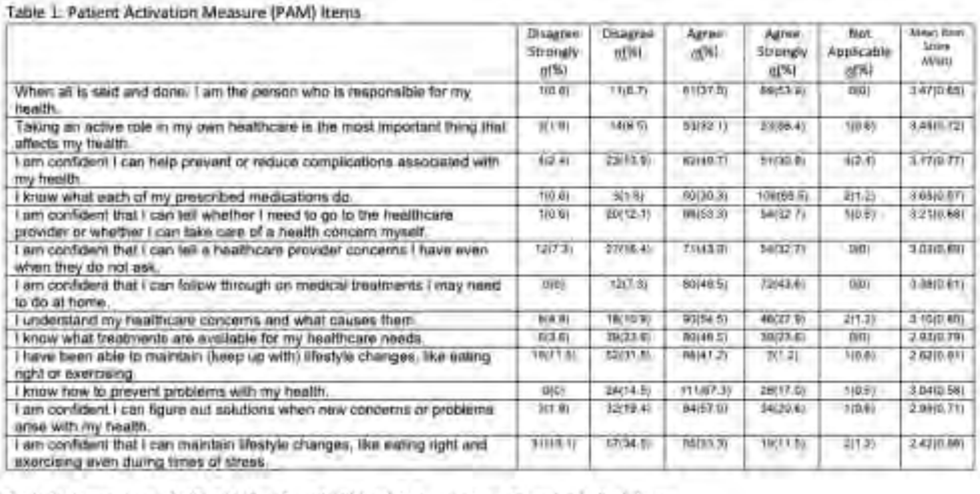
Background: Transgender is an umbrella term used to define a person whose gender identity/expression differs from the one assigned at birth. Many of these individuals will choose medical affirmation treatment to allow their physique to become more congruent with their experienced gender. Unfortunately, discrimination, stigma and pronounced institutional and personal barriers greatly impact a TGD person's ability to successfully access high quality gender affirming healthcare. Patient activation refers to having the knowledge, skill, and capacity to become active partner in their healthcare. The "gold standard" for measuring patient activation is the PAM; however, validity in the TGD population has not yet been established. Knowledge of a patient's level of activation allows healthcare providers to personalize health information and education to the individual's level of activation to maximize benefit.

Methods: A community-engaged, cross-sectional study design was used to recruit a national convenience sample of TGD persons (*N* = 189) online through social media from October - December of 2020. Potential participants were invited to participate in a study to explore TGD person's knowledge and experiences with fertility preservation and healthcare decision making prior to initiating gender affirmation treatment. Complete information was gathered from 165 (87%) to support a rich description of patient activation, and preferred healthcare decision making preferences within this TGD sample.

Results: Data was gathered from 165 TGD adults (>18 years). Seventy-seven (46.7%) persons identified as transmasculine, 59 (35.8%) as transfeminine and 29 (17.6%) as nonbinary. The majority of participants (*n* = 128 ;77.6%) were under the age of 45, white (*n* = 139; 84.2%) and college educated (*n* = 151: 91.5%). The PAM was found to be a valid and reliable measure of patient activation within TGD persons (Cronbach's *a* = 0.81). PAM scores for the sample ranged from 35.50 to 90.70 (*M* = 59.25; *SD* 13.53). Table 1 presents mean PAM item scores. Participants reported the least confidence in ability to manage lifestyle adaptations, such as eating healthy or exercising. They reported the highest level of confidence in their medication knowledge. Within the sample, Individuals self-identifying as transfeminine had significantly higher PAM scores than their TGD counter parts (*M* = 61.19; *SD* = 13.64 vs *M* = 54.40; *SD* = 13.96 respectively) (*t* = 0.03 (85*df*). No other "in-group" differences were identified. Patient activation within this sample differs from that identified in other populations; TGD persons 2-3 times more likely to have the lowest level of activation (Level 1) and half as likely to have the highest level of patient activation (Level 4) (Table 2).

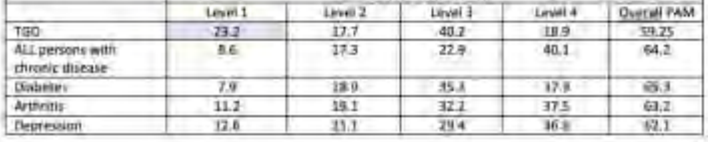
Conclusions: The PAM-13 is a useful tool for understanding health behaviors in the TGD population. However, the unexpected findings regarding low levels of TGD patient activation, additional research is needed. While preliminary findings are promising, replication within a larger more diverse sample would enhance our understanding of the use of the PAM in the TGD population.

Table 1: Patient Activation Measure (PAM) Items



	Disagree Strongly n(%)	Disagree n(%)	Agree n(%)	Agree Strongly n(%)	Not Applicable n(%)	Mean Item Score M(sd)
When all is said and done, I am the person who is responsible for my health.	1(0.6)	11(6.7)	61(37.0)	89(53.9)	0(0)	3.47(0.65)
Taking an active role in my own healthcare is the most important thing that affects my health.	3(1.8)	14(8.5)	53(32.1)	93(56.4)	1(0.6)	3.45(0.72)
I am confident I can help prevent or reduce complications associated with my health.	4(2.4)	23(13.9)	82(49.7)	51(30.9)	4(2.4)	3.17(0.77)
I know what each of my prescribed medications do.	1(0.6)	3(1.8)	50(30.3)	108(65.5)	2(1.2)	3.65(0.57)
I am confident that I can tell whether I need to go to the healthcare provider or whether I can take care of a health concern myself.	1(0.6)	20(12.1)	88(53.3)	54(32.7)	1(0.6)	3.21(0.68)
I am confident that I can tell a healthcare provider concerns I have even when they do not ask.	12(7.3)	27(16.4)	71(43.0)	54(32.7)	0(0)	3.03(0.89)
I am confident that I can follow through on medical treatments I may need to do at home.	0(0)	12(7.3)	80(48.5)	72(43.6)	0(0)	3.38(0.61)
I understand my healthcare concerns and what causes them.	8(4.8)	18(10.9)	93(56.5)	46(27.9)	2(1.2)	3.10(0.80)
I know what treatments are available for my healthcare needs.	6(3.6)	39(23.6)	80(48.5)	39(23.6)	0(0)	2.93(0.79)
I have been able to maintain (keep up with) lifestyle changes, like eating right or exercising.	19(11.5)	52(31.5)	68(41.2)	2(1.2)	1(0.6)	2.62(0.81)
I know how to prevent problems with my health.	0(0)	24(14.5)	111(67.3)	28(17.0)	1(0.6)	3.04(0.58)
I am confident I can figure out solutions when new concerns or problems arise with my health.	3(1.8)	32(19.4)	94(57.0)	34(20.6)	1(0.6)	2.99(0.71)
I am confident that I can maintain lifestyle changes, like eating right and exercising even during times of stress.	30(18.1)	57(34.5)	55(33.3)	19(11.5)	2(1.2)	2.42(0.86)

Table 2. Comparison of TGD PAM levels with Hibbard & Cunningham Chronic Medical Group



	Level of Activation				
	Level 1	Level 2	Level 3	Level 4	Overall PAM
TGD	23.2	17.7	40.2	18.9	59.25
ALL persons with chronic disease	8.6	17.3	22.9	40.1	64.2
Diabetes	7.9	18.9	35.3	37.9	65.3
Arthritis	11.2	19.1	32.1	37.5	63.2
Depression	12.6	21.1	29.4	36.9	62.1

Birth Includes Us: Development of a Survey Exploring Respectful Care for LGBTQ Families

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Purpose/Aims: The purpose of the overall study is to explore pregnancy care experiences for those in the Lesbian, Gay, Bisexual, Transgender, Queer, and other sexual and gender minority (LGBTQ+) communities, specifically focusing on respectful care provision. In the first phase of our study, we aimed to develop and content validate a survey capturing the experiences of LGBTQ+ birthing people and their families using community-engaged methods.

Background: Disrespect and mistreatment by health care providers in pregnancy and childbirth is well-documented and is associated with persisting health disparities for many marginalized communities. Given the lack of attention on health care for LGBTQ+ communities and an expressed community need to measure experiences of respect and mistreatment in perinatal services, we sought to develop and content validate a survey to capture the unique experiences of LGBTQ+ perinatal patients and their families, with future implementation across the U.S. and Canada.

Methods: Following best practices for community participatory action research methods , we convened a Community Steering Council (CSC) including patients, researchers, health care providers, and community birth workers with lived experience within the U.S. and Canada. Over a two year period, we co-created a survey instrument, adapting existing validated measures and creating new items specific to the experience of LGBTQ+ family building through an iterative process. The instrument was subjected to multiple rounds of review by the CSC, and underwent content validation by community expert reviewers who assessed the draft online survey for relevance, clarity and importance to lived experience of perinatal services across a range of gender and sexual identities.

Results: The survey, consisting of approximately 126 questions, was developed and content validated using an iterative process among 24 CSC members and 30 community expert reviewers. The community expert reviewers recommended revision on 26 questions, with the majority of feedback aimed at making the survey as inclusive as possible for a diverse set of experiences. The final instrument includes demographic questions and items assessing respect, mistreatment, stigma, and discrimination during preconception, pregnancy, and birth experiences, with pathways to capture experiences of miscarriage, stillbirth, and abortion. In addition, the instrument captures the perspectives of all in the family unit, including the pregnant/birthing individual, a partner/co-parent, and/or an intended parent using surrogacy.

Implications for Further Research: The next phase of this project will include pilot implementation of the survey across the U.S. and Canada to further validate the adapted scales within the survey and to assess the feasibility of capturing a diverse representation of identities within study recruitment. Data from this survey has the capacity to transform pregnancy care for LGBTQ+ individuals and families, filling a much needed gap in respectful perinatal care research.

Funding: Funded by University of Washington Research and Intramural Funding Program, University of Washington Royalty Research Fund, and the University of Washington/University of British Columbia Collaborative Research Mobility Award.

Losing a Child: A Grounded Theory of Failed Infant Adoptions Among Gay Men

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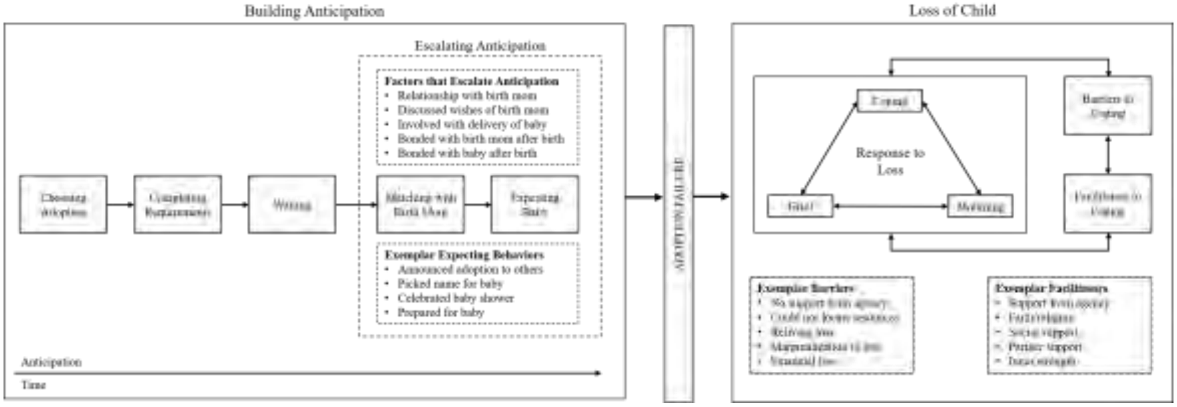
Although there are many paths for LGBT people to take when wanting children, adoption is becoming increasingly common. The latest census report revealed that 14.7% of the 1.1 million same-sex U.S. couples had at least one child under 18 years of age, and that nearly 300,000 children had a parent with a same-sex partner. Moreover, there are more than 2 million LGBT adults who are interested in adopting children. Just like different-sex couples, these figures do not represent the immeasurable number of LGBT people who have experienced failed adoptions, which is when the adoption process ends before it is legally finalized. Although the psychological and emotional impact of a failed infant adoption on an LGBT adoptive parent is not documented in research, it is likely profound. No studies to date have examined the experiences of gay men following a failed infant adoption. Gay men are at particular risk for experiencing psychological distress following a failed adoption due to gay-specific stressors and disenfranchised grief. The aims of this grounded theory study were to discover the experiences of gay men who had a failed infant adoption and to explore the grief and coping response. Participants were recruited from the largest gay parenting social media networking group. Semi-structured in-depth interviews were audio-recorded and transcribed. Data were inductively analyzed using a process-based coding scheme, which is a way of grouping together sequencing parts of a phenomenon. This process involved three coding stages: initial, focused, and theoretical. Eight people participated in the interviews, representing 10 distinct failed adoptions. All participants identified as white non-Hispanic cisgender gay men, and their mean age was 43 years. All adoptions were open and fully disclosed. Eight out of the nine adoptions failed after the baby was born. Data analysis resulted in an explanatory process-based framework. The process is divided into three categories: (1) building anticipation, (2) adoption failure, and (3) loss of child. The first category represents the building anticipation that participants experienced leading up to the expected birth and adoption of their newborn baby. Participants described a series of phases that happened over time, each adding to their anticipation level of adopting a newborn baby. Adoption failure is the point in the process when participants discovered that the newborn baby would not be joining their family. The universal reason for adoption failure in this study was a change in decision of the birth mom. The adoption failure was distressing and unexpected news to every participant. This phase triggered a complex emotional response, referred to as 'loss of child' in this study. Participants described experiences of grief, mourning, and coping. Although different, the experience of failed infant adoption is similar to pregnancy loss. Unlike pregnancy loss, failed infant adoption often goes unrecognized and unsupported. This was the first study to explore the experiences and grief and coping responses of gay men who had a failed infant adoption.



Funding: Nevada State College Research Stipend

Are We Ready? COVID-19 Impact on Nursing Students' Perceived Readiness to Practice

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Purpose: To examine the perceived clinical preparedness of nursing students who experienced alterations in their learning during the COVID-19 pandemic.

Background: New graduate nurses often experience a theory-practice gap in their transition from student nurse to registered nurse. This gap was compounded when the COVID-19 pandemic caused a fast wave of clinical site closures starting the Fall of 2020 that forced nursing schools to shift to alternative modes of instructions and training (AMI&T). This shift challenged nursing students' abilities to complete their schooling timely and impacted their perception of their readiness to practice.

Methods: A Survey-designed study involving undergraduate nursing students in their final two semesters at a four-year public university in Southern California during Spring of 2021. A total of 46 students responded to the online survey which was developed using the Microsoft Office Forms application. The survey was comprised of three components: demographics and nursing education questions, students' ratings of the AMI&T experiences, and Clinical Competence Questionnaire (CCQ). The CCQ is a 46-item validated scale to assess the perceived clinical competence. The Cronbach's alpha in this study was .95. CCQ assesses four categories of competencies including: (a) nursing professional behaviors (NPB), (b) general performance (GP), (c) core nursing skills (CNS), and (d) advanced nursing skills (ANS). Respondents rate each item using a 5-point Likert scale, where 1 indicates that a student does not know the skill in theory or practice and 5 indicates that a student knows the skill in theory and feels competent in practice without supervision. Scores on the total CCQ range between 46 and 230. Higher scores on the total CCQ indicate higher overall competency.

Results: The data were analyzed using SPSS-25 software. Results showed that students, on average, experienced AMI&T in 4 courses since COVID-19 imposed alterations during Fall 2020. Overall, 89% of participants reported feeling less prepared to enter the workforce given the learning modifications during the pandemic. Participants' overall perceived clinical competence scores (total CCQ) ranged from 128 to 212 (M=169, SD=22). Students' perceived competencies averages for NPB, GP, CNS, and ANS were 65 (SD =7.9), 42 (SD =6.8), 45 (SD =7.8), and 16 (SD=4.2) respectively. There were significant negative correlations between the number of courses students experienced in AMI&T and students' perceived competence in the Core and Advanced Nursing Skills, (r=-.38, p=.008; r=-.35, p=.018 respectively). Results also demonstrated an inverse correlation between perceived General Performance and the number of missed clinical days during the Fall 2020 semester (r=-.32, p=.03).

Implications: It is critical to assess the impact of AMI&T imposed by COVID-19 on student nurses' readiness to transition to practice in order to design strategies that will help impacted students when they go back to training fully face to face or join the workforce. Student nurses who lost part of their clinical experience due to the pandemic may require a longer adjustment period during their preceptorships and tailored orientation programs to improve their overall perceived preparedness. Nursing programs and hospitals will need to implement catch up programs to bridge this gap.

In Their Own Words: Nursing Student Challenges during the COVID-19 Pandemic

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Purpose & Aims: The purpose of our study was to identify self-disclosed challenges experienced by pre-licensure nursing students in community college and university settings during the COVID-19 pandemic. The aim is to create a tool kit of strategies that nursing programs and faculty can use at present and in the future to mitigate challenges during public health emergencies or other crises.

Rationale and Background: The pandemic was traumatic for faculty in making abrupt pedagogical delivery changes and for students in making monumental shifts in how they learned. This was coupled with stress and fear of changes to day-to-day life. Nursing school is challenging for students in the best of times. Identifying student challenges that illuminate necessary changes in educational delivery and policy will facilitate students' successful entry into the nursing workforce.

The New Mexico Nursing Education Consortium (NMNEC) is a collaborative model of twelve state-funded nursing programs, both ADN and BSN, that share policies, curriculum, and programmatic evaluation tools. Schools are both urban and rural with many near tribal lands, providing a diverse student pool including a high percentage of Hispanic and Native American student perspectives.

Methods: IRB approval was obtained for the study. Student surveys are routinely completed at the end of each semester to elicit programmatic feedback. Starting in Spring, 2020, questions were added to acquire student perceptions of learning experiences during the COVID-19 pandemic. One question particularly struck a chord with students: "What was the biggest challenge that you had in completing this semester?" We used Braun and Clark's thematic analysis to determine categories, themes and codes from the Spring 2020 survey. The five authors collaborated to achieve consensus on categories and themes. We met together for an hour on a weekly basis over 14 weeks. Graphic organizers were used to visually display categories, themes, and codes to inform discussion and implications for nursing education, research, and policy.

Results: Fifty-eight students answered our question, many with poignant in-depth responses. These categories were identified: Technology issues, Concerns with On-line Learning Methodology, Student Emotional Responses, Faculty Actions/Reactions, Communication, Not Ready to Go Out and Practice, and Adapting to Change. The theme of Living with the Pandemic was threaded throughout many responses. Coding for each category includes direct quotes, the student voices.

Implications for Education, Research, and Policy: Pivoting from in-person to on-line course delivery at a moment's notice is now essential. Nursing programs could invest in training for all faculty regarding on-line learning best practices. Students need regular exposure to on-line learning, including test-taking. Research and entrepreneurship are needed to develop products and strategies for on-line skills acquisition to mitigate student distress with lack of hands-on learning. Best practices for timely communication, such as virtual town halls, are needed. Support for students including hot spots for Wi-Fi, emergency funds, and mental health resources are important. Finally, readily operational policies, such as grading, course completion, and use of virtual simulation for clinical hours necessitate thoughtful implementation.

Strategies to Reduce Burnout Among Nursing Faculty and Staff Affected by COVID-19

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Purposes: The purposes of this study were to determine the impact of the COVID-19 pandemic on faculty and staff in a College of Nursing (CON), and identify practical strategies that could be used to reduce stress and burnout.

Background: The continually evolving nature of the COVID-19 pandemic and its ensuing restrictions have presented challenges for individuals working in nursing academia. In March 2020, faculty and staff of universities across the country were abruptly sent home, expected to transition to the online format. This created both challenges and opportunities.

Methods: An on-line mixed-methods survey was developed and sent to all faculty and staff in the CON. Quantitative and qualitative data were collected through a convenience sample using both open-ended and closed-ended questions. Descriptive statistics were used to analyze the data.

Results: A total of 139 faculty and staff responded to the survey. Of those, 62% were faculty (n= 86) and 38% were staff (n=53). The survey asked respondents to rate their experiences with working from home, including the effect on work-related factors and social-lifestyle factors. Ratings included three categories: “Better, No Change, or Worse”. Respondents were also allowed space for free-text comments with each topic.

With work-related factors, the areas that were found to be worse were in ergonomics of the home office, collaboration with colleagues, length of the work day, and social isolation. The top factors that were noted to be better included work productivity, flexibility, online teaching support, remote access to meetings, and respect and understanding from colleagues. In addition, respondents felt that leadership trusted them to work productively from home, which was noted to be an important aspect of the overall experience.

With social-lifestyle factors, the majority of respondents noted worse outcomes in almost every category. This was particularly noteworthy with work-life balance, sleep, self-care, and connectivity with friends, family and colleagues. With regard to physical activity and nutrition, diverging comments were noted, with half stating these were better and half stating these were worse. The one aspect where the majority felt things were better was with increased time outdoors.

Strategies identified to reduce stress and burnout included making time for informal collaboration with colleagues, ensuring good nutrition, creating a dedicated work space, focusing on progress and not perfection, incorporating exercise, and improving time-management skills.

Suggestions for how leadership in the CON could be more supportive included increased flexibility with working hours, increased transparency, continued trust to work from home, and ensuring online meetings were necessary and productive.

Conclusions: These findings highlight the impact of the regulations imposed on nursing faculty and staff as a result of the COVID-19 pandemic, as well as some valuable ideas on how to reduce stress and burnout. Faculty and staff require ongoing support from leadership and colleagues. They also must make time for self-care. Leadership in the CON should continue to be sensitive to the challenges and needs of faculty and staff as this pandemic evolves. Open communication and transparency are key elements in the successful transitions required.

COVID-19 and Nurse Resilience from a Global View

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Purpose: The purpose of this cross-sectional descriptive study was to examine how the COVID-19 pandemic affected in registered nurses in the areas of compassion fatigue, burnout, and resilience. Nurses were queried on their compassion fatigue or compassion satisfaction, burnout, resilience, fear of infection, level of organizational/institutional support in caring for patients as well as nurses' safety, and intention to leave nursing as a profession. Our study was based on an ecological model that examined factors at 5 levels.
Significance: Nurses comprise the largest group of healthcare professionals and are responsible for delivery of personal and life-saving care, especially with high-risk and vulnerable patients. Nurses were seen as 'heroes' during the COVID-19 pandemic due to their high level of expert care and willingness to work in dangerous circumstances from exposure to a deadly pathogen. Nurses died from COVID-19 and more have pondered leaving the profession. It is essential that support is provided to the nursing workforce to maintain the high level of care that is delivered. Nursing research can illustrate areas support where is needed and how to provide such support.
Methods: An online survey using REDCap was sent via nursing networks to RNs in active practice. The survey included demographics, questions about their organization's handling of pandemic, and established instruments. CD10 was used to measure resilience, and ProQOL 5 was used to measure compassion fatigue, burnout, and compassion satisfaction. No sample size was predetermined. We obtained a sample of 904 nurses globally. Multiple regression with all variables were entered simultaneously and maximum likelihood estimation with robust standard errors (MLR) was used to estimate parameters using Mplus software.
Results: Nurses who tested positive for COVID-19, who were fearful of infection, and who desired to leave nursing had lower resilience than nurses without these responses. Nurses who participated in their organizations' plans for COVID-19 and who had adequate provision of PPE had higher resilience than nurses in organizations that did not include them in plans or provide sufficient PPE.
Implications: It is incumbent upon healthcare organizations to include nurses in planning for pandemics and infection control and to provide sufficient PPE to protect their health.

Funding: Arizona State University, Institute for Social Science Research

The Impact of the COVID-19 Pandemic on Nurse Compassion, Burnout and Moral Distress

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Purpose: A mixed-method non-experimental observational longitudinal study was conducted from October 2020 through March 2021. The study utilized a validated survey questionnaire and a qualitative descriptive design to explore nurses' self-perceived levels of compassion fatigue, satisfaction, moral distress, moral injury, and burnout during the Covid-19 pandemic.
Rationale: The Covid-19 pandemic has created unprecedented challenges for health care organizations across the world. Uncertainty and changes in care priorities can lead to high levels of moral distress and burnout in nurses. Moral distress, compassion fatigue, and burn-out have long-lasting effects on patient care and nurse retention.
Conceptual Basis: This study utilized Thomas and McCullough's (2014) philosophical taxonomy. Thomas and McCullough state that the nurse's moral integrity has professional and individual components. When nurses encounter situations that impact their moral integrity, which progresses from challenges to threats and violations, significant ethical and moral distress develops.
Methods: All Registered Nurses and Licensed Vocational Nurses working in an acute care organization with ambulatory, same-day procedural areas, and specialized clinics were eligible for study participation. Quantitative data were collected from a convenience sample of 207 nurse participants during two peak waves of the pandemic; October 2020 and March 2021. The Professional Quality of Life Scale (ProQOL-5) validated survey tool was utilized. The ProQOL-5 tool measures Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS).
Qualitative data were collected from semi-structured interviews conducted by a single researcher on 15 nurses from acute inpatient and ambulatory care areas. All interviews were conducted in a private office, encouraging each nurse to share their lived experience.
Results: Data was analyzed to determine if there were differences between groups. Following univariate analysis, a two-sample t-test was conducted. Significance was set at $p< 0.05$. Comparison between month 1 (October n=117) and 4 (March n=89) showed no significant change in CS or STS. However, BO scores had a significant change, $p=0.13$. Data were then separated into groups. Group 1 consisted of nurses assigned to direct care of Covid-19 patients. Group 2 consisted of nurses assigned to direct care of non-Covid-19 patients. Significant changes were noted in BO, $p= 0.29$ and STS, $p< 0.001$.
Qualitative analysis was conducted following transcription of each interview with a back and forth analysis immersing researchers in the data. The following themes were identified: feelings of exhaustion related to emotional needs of Covid patients and family members, care validation, fear for self and family, lack of support and appreciation for their emotional wellbeing, and difficulty looking after non-Covid patients related to the degree of care demands when compared to Covid patients.
Implications for Practice/Policy: Results of this research reinforce a need for leaders to not only operationalize processes and procedures that provide for the unique patient care needs but also care for front line nurses when faced with changes in patient care priorities related to a pandemic public health model. As organizations continue to adjust to the Covid pandemic, addressing nurses' emotional distress is urgent, with undetermined long-term effects.

Relationships between Health Factors and COVID-19-Related Diet Changes Among Nurses

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Purpose: To determine relationships between nursing demographics, perceived stress, exercise, and reported diet quality changes during COVID-19 among acute care Registered Nurses working full-time, 12-hour shifts.
Background: Diet quality is an important social determinant of health to reduce risk for all-cause mortality and especially preventable diseases. Registered Nurses working in the acute care setting during the COVID-19 pandemic have reported increased stress, and strong evidence supports that stress is related to unhealthy diet quality. Increased stress is also linked to poor occupational outcomes, including higher risk for more missed days from work and poorer nursing care delivery. Nurses may need support to prevent worsening diet quality due to the stress of working during the pandemic, yet it is unclear what factors relate to self-reported changes to diet quality in this population.
Methods: Guided by Orem's Self Care Theory, nurses working full-time, 12-hour day or night shifts from the Western United States were recruited to measure diet, exercise, and stress between October 2020-2021. This analysis describes cross-sectional, nurse-reported measures (demographics, stress, and changes to diet and exercise) collected during the pandemic.
Results: Fifty-seven nurses provided data. Of these, 24 (42.1%) reported worse, 19 (33.3%) reported same, and 14 (24.6%) reported improved diet quality in the context of COVID-19. In our sample, nurses with an improved diet quality reported significantly less stress (m = 4.9) compared to those with a poorer diet (n = 6.6, U = 105.5, p = 0.03). Significantly more nurses with an improved diet quality worked day shift (n = 12, 85.7%) and had a significantly lower BMI (m = 24.1) and waist circumference (m = 31.3 in.) compared to those reporting a worsened diet (m = 29.6; 36.7; $p<0.05$, respectively). Proportionally more nurses with a better or the same diet quality exercised more since the pandemic (n = 18, 54.5%) compared to those with a worsened diet (n = 11, 45.8%; n = 2, 8.3%; $p<0.05$). Step data support the exercise finding; nurses with an improved or the same diet quality reported more daily steps on average compared to those with a worsened diet quality (p = 0.04). Furthermore, nurses reporting a worsened diet since the COVID-19 pandemic also had an increased risk for not meeting national recommendation for daily step requirements (RR=2.36, 95%CI = 1.28 – 4.46, 0.006).
Implications and Further Research: Our study demonstrated that nurses with an improved diet quality since the pandemic were more likely to have also increased exercise habits and work the day shift compared to those with a worsened diet. Also, nurses in our sample who reported an improved diet quality perceived less stress compared to those whose diet quality stayed the same or worsened. Future research is needed to uncover best strategies to support diet and exercise self-care practice and promote overall wellbeing for working nurses, especially when employed during times of high stress or when working the night shift.

Funding: Private foundation grant money: Providence Health Care Foundation and the Selinger Shone Foundation

Novel Factors of Health Disparities of Mothers and Their Very-Low-Birthweight Infants

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Aims: To test the hypotheses that (1) biological factors of testosterone and cortisol levels are associated with sociodemographic factors and (2) both sociodemographic and biological factors are associated with neonatal health, maternal mental health, and maternal healthy behaviors of mothers and their very-low-birthweight (VLBW, BW < 1,500 g) infants.

Background: Racial disparities exist in the prevalence of VLBW and very preterm birth (gestational age [GA] < 32 weeks), with rates in Black mothers being 2.6 and 2.5 times those in White mothers, respectively. Black VLBW, very preterm neonates are also at higher risk for adverse health outcomes than White neonates. Interventions to reduce the risk of adverse neonatal health and maternal mental health have yet to be effective in reducing disparities. Sociodemographic factors and environmental factors such as expose to racial discrimination and structural racism contribute to disparities, yet those factors are difficult to modify. The development of interventions requires measurable, modifiable markers to serve as indicators of risk and to use in assessment of intervention effects. Testosterone and cortisol can be used as biological markers as they are involved in stress-regulation.

Methods: We used a descriptive, longitudinal research design to test our hypotheses. Participants included 88 mothers and their VLBW, very preterm neonates recruited from a tertiary medical center in the southeastern U.S. Data on sociodemographic factors (age, marital status, education, race, body mass index, obstetric complications, type of health insurance) and neonatal health (GA, Apgar scores, resuscitation at birth, physical growth, neurological insults, days of hospitalization at 40 weeks' GA) were collected from medical records and interview. Maternal mental health (depressive symptoms, anxiety, perceived stress) and healthy behaviors (healthy eating, refraining from smoking and drinking) were collected with questionnaires. Maternal salivary testosterone and cortisol levels were measured at birth and 40 weeks GA using enzyme immune assays. Data were analyzed using general linear, general linear mixed, and generalized linear models.

Results: Means of maternal testosterone and cortisol levels were 58.61 pg/ml and 0.15 µg/dL at birth and 55.77 pg/ml and 0.23 µg/dL at 40 weeks' GA, respectively. High testosterone and/or low cortisol were associated with younger age, less education, enrollment in a federal-assistance program, being unmarried, and being Black; poorer neonatal health (more resuscitation at birth, and more days of hospitalization); and delayed physical growth in body weight, length, and head circumference. Low cortisol was associated with higher levels of depressive symptoms. Higher maternal BMI was associated with higher GA; younger age was associated with higher 1-min Apgar score; being married was associated with higher 1-min Apgar score and less-frequent resuscitation at birth; having private insurance was associated with higher 1-min Apgar score. Black mothers had fewer healthy behaviors than White mothers.

Implications for Translation to Practice and Future Research: Findings confirm that biological factors are associated with sociodemographic factors, and both factors are associated with neonatal health and maternal mental health and healthy behaviors. We propose using sociodemographic and biological factors concurrently to identify risk and evaluate ante- and postpartum interventions to reduce disparities.

Funding: This study was partially supported by a grant from the NICHD, NIH (R01HD076871) to the first author.

Examining Cesarean Birth Among Women of Advanced Age in Nurse-Midwifery Care

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Aims: 1) Using the Robson 10-Group Classification System (TGCS) compares Cesarean Birth (CB) utilization between women ≥ 35 years old (advanced maternal age, AMA) and those ≤ 34 years old in a sample of births attended by Certified Nurse Midwives, and 2) Examines the antecedent events and/or indicators for CB in Women of AMA within Group Classifications.

Background/Rationale: For decades, there has been heightened concern about rising rates of CB. In 2015, the WHO proposed the use of the Robson TGCS as a global standard for assessing, monitoring, and comparing CB rates within/across healthcare facilities around the world. While many studies are using the Robson TGCS when reporting about CB, most have used the TGCS across all ages of parturient women. Few studies have focused on AMA subgroups specifically, which is critical due to growing numbers of older women giving birth worldwide. Further, no studies have examined CB among women of AMA within a midwifery care setting, which tend to care for a healthy population, despite their age. Understanding overall CB rates, as well as the antecedent events to and/or indicators for CB in women of AMA may provide additional insights into contributions to CB rates.

Methods: This was a cohort study using the OHSU CNM Clinical Data Repository, which was gathered prospectively at the time of service. This database includes 194 variables across antepartum, intrapartum and postpartum care from 2012 and 2020. A total of 3,830 recorded births were available for this analysis. We assigned each birth to one of the 10 mutually exclusive Robson Groups. Each of the 10 groups were then subdivided into two groups by maternal age (at the time of birth) - < 35 vs ≥ 35 years of age. Descriptive statistics were used to examine CB use across Robson groupings. Chi-square was used to examine the difference in CB rate between the two groups. Finally, we used logistic regression with interaction terms to examine the role of AMA status on CB while controlling for relevant confounders.

Results: Overall, women of AMA underwent CB more frequently (40.4% vs 22.7%). In the AMA group, the largest contributor to CB was Robson Group 2 [nulliparous term labor induction] followed by group 1 [nulliparous term spontaneous labor] and group 5 [multiparous term with previous CB]. Yet, Robson Group 1 was the largest contributor to CB in women < 35 years old followed by Group 2 and 5 respectively. The logistic regression models indicated that AMA status was predictive of CB controlling for gestational age, BMI, hypertension and labor induction complexity. Overweight/obesity was also predictive of CB though, only for non-AMA women (OR 2.48, 95% CI: 1.47-4.18) in Robson Group 2.

Conclusion: Overall, women ≥35 appear to be more likely to have a CB in nurse-midwifery led care. Further, women having their labor induced were the main contributors to the overall CB rate. This data offers insight into the groups most in need of interventions to maximize success during labor induction in particular.

Characterizing Uterine Activity in Women with Obesity to Prevent Cesarean Delivery

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Purposes/Aims: The aim of this study was to characterize uterine activity, measured in Montevideo units (MVU), in nulliparous women with obesity who had spontaneous onset of labor and augmentation.

Rationale/Conceptual Basis/Background: The majority of unplanned cesarean births in nulliparous people are indicated by labor arrest (lack of cervical dilation despite adequate uterine activity). Cesarean births expose women and their infants to surgical risks and careful weighing of risks and benefits is needed to prevent unnecessary harm. Women with obesity experience higher rates of cesarean birth and the related complications. The physiology of the uterus and of uterine contractions is known to be affected by obesity, yet clinical practice guidelines fail to differentiate best care for women with and without obesity. Importantly, Black and Hispanic women experience higher rates of both obesity and cesarean birth; this intersectionality likely contributes to disparities in perinatal outcomes among these populations.

Current clinical management of slow labor centers on augmentation of contractions with synthetic oxytocin titrated to achieve 200 Montevideo units (MVU); cesarean birth is recommended after 4 hours of arrested labor with uterine contractions > 200 MVU or after 6 hours of arrested labor with uterine contractions < 200 MVU. Women with obesity are known to require higher oxytocin doses and have longer active-phase labor than women without obesity, yet uterine activity in this population has not been characterized.

Methods: A retrospective cohort study of hourly data characterizing uterine activity using Montevideo units (MVU) and cervical dilation in (n = 79) nulliparous women with obesity who had spontaneous onset of labor which was augmented with oxytocin was conducted. Differences in measures of uterine activity and oxytocin augmentation by birth route were evaluated using independent t-tests.

Results: The mean and maximum MVU did not differ by birth route. Among the women in our sample with prolonged labor dystocia beyond the 4-hour threshold, (N = 51), 36 women (70.6%) had uterine activity > 200 MVU. Of these 36, 24 women (66.67%) went on to have a safe vaginal birth even though they labored for more than the 4-hour time limit. In total, 30% of the sample had a vaginal birth after exceeding the 4-hour guideline despite achieving the threshold for adequate uterine activity.

Implications for Translation to Practice/Further Research/Policy: Despite 200 MVU being the primary measure of adequate uterine activity, there were no differences in birth route by whether women reached 200 MVU in this sample. Our findings indicate that women with obesity need more time to progress in labor and higher oxytocin doses even if they reach the 200 MVU threshold of adequate uterine activity. Care strategies in this single hospital setting allowed for extended labor dystocia in the presence of maternal and fetal wellbeing and reduced cesarean births by 30% compared to if current national guidelines had been followed. Adjusting guidelines nationally to reflect different expected labor patterns in women with obesity is important to optimize outcomes for these maternal/fetal dyads and to address racial disparities in perinatal health.

Funding: NIH NINR FN31NR018582-01 Doris Kemp Smith Award, University of Colorado College of Nursing

Anemia in Pregnant and Lactating Women in Haiti: A Longitudinal Quantitative Analysis

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Purpose: The purpose of this longitudinal analysis is to evaluate change over time in anemia status among disadvantaged pregnant or lactating women ages 15-49 following the implementation of an anemia prevention program in a rural community in Haiti. We hypothesized that women who attended the free biannual clinics more frequently are more likely to have higher hemoglobin levels over time.

Background: Haiti's anemia prevalence in 2019 among women of reproductive age (15-49 years) is 48%, compared to 30% worldwide. Anemia jeopardizes maternal and fetal well-being and continues to negatively impact children's development after birth. The Haiti Health Initiative (HHI), a nurse-led non-profit organization, and its Haitian sister organization provide the only healthcare access for most rural Haitians in Timo. HHI addressed anemia through free biannual outreach clinics, supplementation of iron-rich vitamins, and education related to nutrition, water, and sanitation.

Methods: This longitudinal retrospective secondary analysis utilizes patient data collected at outreach clinics between 2011 and 2019. Inclusion criteria comprise (1) any pregnant/lactating woman in the clinic database who (2) attended at least three clinics, and (3) had at least one blood hemoglobin test recorded in her patient medical records. Prior to statistical analysis, data were cleaned and verified with paper records to ensure accuracy. Time-varying anemia states were assigned based on hemoglobin levels and pregnancy status. Multilevel and multistate analyses in R were used to model individual trajectories and state transitions, respectively.

Results: Between 2011-2019, 782 pregnant or lactating women aged 15-49 years attended the HHI clinic, 323 of which met study inclusion criteria. The overall mean hemoglobin of participants was 11.1 g/dL, with an average hemoglobin of 10.5 g/dL for pregnant women and 11.5 g/dL for non-pregnant women, suggesting mild anemia. Both pregnant (59.7%) and non-pregnant women (58.0%) were more likely to be anemic than non-anemic, reflecting a higher prevalence rate than Haiti's national average (48%). Multilevel analysis indicated modest improvement in hemoglobin levels ($\boldsymbol{\beta} = 0.05$ g/dL/visit) ($p = 0.0048$). Multistate modeling also suggested improvement in women's anemia category, transitioning from a high-risk category (moderate or severe anemia) to a low-risk category (normal or mild anemia) (transition probability = 0.68 over 5 visits) and staying in the low-risk category once achieved (self-transition probability = 0.68 for 5 visits).

Nursing Implications/Future Research: Longitudinal patient data in low- and middle-income countries, such as Haiti, are scarce but essential to improving healthcare access and quality for vulnerable populations. Modest hemoglobin increases suggest the need for nurses to develop innovative and culturally appropriate approaches to deliver evidence-based interventions to hard-to-reach populations. For example, anemia interventions should consider integrating iron-rich vitamins with vitamin C supplementation to elicit a greater hemoglobin increase. Future analysis should address potential baseline and time-varying confounding and informative censoring via traditional marginal-structural models and longitudinal targeted maximum likelihood estimates (ltmle). Future research should collect prospective qualitative data to understand ecological factors influencing quantitative results.

Using Systems Level Thinking and Complexity Science to Dismantle Obstetric Violence

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Purposes/Aims: The purpose of this presentation is to describe the structure and function of the concept of obstetric violence from a systems level perspective with the use of complexity theory recommended for advancing the science and solutions to structural problems. Aim 1: Present the related concept of obstetric racism as an exemplar of how structural racism impacts the reproductive lives of Black women in particular where it can both parallel and intersect with obstetric violence. Aim 2: Present community-based and interprofessional models of care with a midwifery presence as solutions known to provide better clinical outcomes and increase satisfaction for the birthing person.
Definition of Concepts: Obstetric violence is abuse or mistreatment by a healthcare provider of a female person across the childbearing continuum. It is a violation of respectful treatment and bodily autonomy and usually involves a lack of informed consent, coercion, or disregard of refusal. It is internationally recognized as a gender based, sex specific form of violence against women and a violation of human rights. Obstetric racism lies at the intersection of obstetric violence and medical racism, where racism is the violence that increases risks and harms rather than obstetric violence broadly coming first.
Conceptual Approach: The intersection of risk factors associated with implicit biases that contribute to health disparities places marginalized groups at increased risk for harm and inequitable outcomes. This view illustrates where the related concepts of obstetric violence and obstetric racism as parallel and intersectional occurrences can be seen. This juncture is where common solutions to obstetric violence and obstetric racism have been demonstrated and are aligned with the use of complexity theory that can account for the multiple dimensions of structural problems that require conjunctive theorizing to connect the concepts. In this way, solutions that require the parts be linked to the whole can be achieved.
Links to Nursing Practice: Nurses are at the center of identifying and mitigating obstetric violence in US hospitals, and they are also vulnerable to bystander trauma and moral distress from a lack of institutionally granted power that may make them witnesses or unwilling participants when obstetric violence occurs. Community-informed models of care support patients in experiencing the benefits of relationship-centered care with midwives, doulas, and nurses to enjoy self-determination while also achieving positive clinical outcomes. The underutilization of nurses and midwives continues to be a factor in limiting patient access to reproductive care based on principles of respectful, individualized care that incorporates informed decision making.
Conclusions: Complex organizational theory provides a framework to understand how obstetric violence and obstetric racism require a systems level approach to be successful at advancing the science while working to deconstruct what enables and perpetuates these structurally embedded problems. The transformative potential to change the behavior of the whole system of maternity care is possible with a paradigm shift. The utility of connecting structurally related concepts with complexity theory offers novel pathways for research designed to be implemented for successful systems level change in the organization and delivery of maternity care.

Nurse-Trained Public Health Directors' Leadership Strategies and Skills

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Aims: To explore the specific strategies used by nurse-trained public health directors in supporting health department performance and health equity.

Background: Evidence points to nurses as possessing particular skills which are important for public health leadership; in particular, investigators have previously found that a local health department (LHD) nurse-trained public health director is strongly associated with positive LHD performance and reduced health disparities. This study aimed to better understand this association and to guide effective deployment of nurse leaders.

Methods: One-on-one audio-recorded semi-structured interviews were conducted virtually from July-September 2020 with 13 nurse public health directors around the country. A critical thematic analysis was used in analyzing all data, developing major themes and sub-themes based on recurring patterns in the data and through analyzing connections between interview themes and ideologies, positions of power, and social hierarchies.

Results: Participants detailed both (1) the strategies they employed to support local health department performance and community health and (2) how they employed these strategies. Major themes focus on the "how" to provide a distinct picture of the *nursing* approach to public health leadership. They were: (a) *approaching their work with an other-focused lens*, (b) *applying theoretical knowledge*, (c) *navigating the political side of their role*, and (d) *leveraging their nursing identity*.

Implications: Through acknowledging the influence of power relations within an organizational structure, findings articulate the nurse-trained public health director's distinctive combination of skills which reflect the interprofessional nature of public health nursing practice. Such skills demonstrate a specialized approach which may set nurse leaders apart from other types of public health leaders. Future research is needed to better understand the training and employment pathways for public health nurse leaders. In addition, this study has important implications for public health practice and policy, as it gives further insight into the value nurse leaders bring to public health and highlights their strengths as leaders. This information can be used to inform policy and practice with respect to effectively employing nurse leaders in carrying out significant public health work.

Funding: Robert Wood Johnson Future of Nursing Scholars Program - Grant ID 566403

Prevalence and Characteristics of the Turnover Intention of Nurse Leaders

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Aims: This project aims to examine the prevalence of turnover intention among nurse leaders in acute care hospitals, explore the characteristics of nurse leaders who intend to leave their position, and examine the relationships between the characteristics and nurse leader turnover intention.

Background: A healthcare organization's financial success, quality of care outcomes, patient satisfaction, and staff retention depend on a stable leadership structure. The definition of nurse leader turnover intention is nurse leaders' desire to quit, excluding internal position changes caused by career advancement opportunities or organizational restructuring. Turnover intention is important to study because previous research has discovered that nurse leaders often change positions and employers over one year. However, a gap still exists in the literature warranting more in-depth investigations of the phenomenon.

Methods: A quantitative approach involving a cross-sectional and descriptive design was used in the study. The study sample was from the 2018 National Sample Survey of Registered Nurses (NSSRN) data. A total of 50,273 eligible participants answered the survey online or with a paper questionnaire from April 2018 to October 2018. Based on the literature review, the investigators identified no manuscripts answering similar research questions with this data. Nurse leaders in this study were defined as participants who reported spending more than 50% of the time in a typical work week on management, supervision, and administrative tasks for the primary nursing position and spent most of the work time on health care management and administration for the primary nursing position. Characteristics of interest in this study included: education (entry-level nursing program, entry-level RN degree, year of graduation from an entry-level nursing program, previous degree before entry-level RN degree, and the highest level of nursing degree, LPN/LVN, health-related jobs before completing the first RN program, student loans, and non-nursing degrees after acquiring the first RN degree), primary nursing employment (location, employed no less than five years, orientation program, assigned preceptor, full-time or part-time, number of hours worked per week, direct patient care, specialty, job satisfaction, practice to the full extent of knowledge, and income from primary nursing position), race (Hispanic/Latino/Spanish, White, Black or African American, Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and other race), marital status, and age.

Results: Older nurse leaders were less likely to report turnover intention ($p = .014$, $OR = .94$, 95% $CI = .891 - .987$). Hours worked in a typical week predicted turnover intention ($p = .001$, $OR = 1.02$, 95% $CI = 1.007 – 1.029$). Low satisfaction in primary nursing position strongly predicted nurse leader turnover intention ($p < .01$, $OR = 6.762$, *95%* CI = 5.338 – 8.567).

Implications: Understanding the prevalence of nurse leader turnover intention and its related characteristics will contribute to a more in-depth discovery of the causes of nurse leader turnover and leads to improved interventions for personal wellbeing, career satisfaction, and retention in nursing leadership.

Turnover Intention in Acute Care Nurse Leaders: A Scoping Review

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Purposes/Aims: The purpose of the scoping review was to map the current knowledge about the factors leading to turnover intention among nurse leaders in the acute care setting. The research question was: What factors are contributing to developing turnover intentions in nurse leaders in the acute care setting?

Background: Effective and stable nursing leadership is imperative to patient care quality and outcomes, patient satisfaction, and healthcare organizations' financial health. It is also paramount to improve staff wellbeing, job satisfaction, retention, and decrease turnover. Research has shown that nurse leaders suffer from high levels of work-related stress and emotional stress related to their decision to leave their role and find a less demanding job. Turnover intention is a multi-phase process leading employees to leave their current position voluntarily.

Methods: The scoping review methodology published by the Joanna Briggs Institute (JBI) was the preferred method. A publication year limit was set to exclude studies published before 2013 due to a Canadian systematic review published in 2013. The reviewers conducted a search using four electronic databases: PubMed, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and PsycINFO, accessed through the University of Arizona's library website. A total of 1841 articles from four databases were included in the initial screening. The reviewers reached a consensus on including 12 citations for full-text screening. The reviewers also examined the reference lists of the 12 selected articles to identify possible eligible articles not located in the database searches. The process yielded additional five eligible articles. The final analysis included ten studies published from 2013 to 2020. All reviewers entered the extracted data from the selected ten articles into an electronic data form created by using Google Forms ™.

Results: Five articles focused on nurse leaders at multiple levels, including shift supervisors, nurse managers, nurse directors, and nurse executives. The other five studies only included nurse managers. All identified factors were grouped into two categories, organizational factors and personal factors. The organizational factors were associated with the nurse leaders' healthcare organizations, including organizational culture, professional vulnerability, workplace relationships, bullying, succession planning, job roles, practice environment, workload, and leadership support. The personal factors were associated with the nurse leaders themselves, including work-life balance, psychological empowering, resilience, job satisfaction, job stress, burnout, personal demographics, physical health, and electronic connectedness to work. The findings of the scoping review indicated that acute care nurse leaders' turnover intention was multifactorial. The factors themselves may have complex relationships with one another.

Implications: The scoping review findings indicated the lack of research on nurse leader turnover intention in the current scientific inquiries. All ten studies included in the review identified the factors influencing acute care nurse leaders' intent to leave. Future research should continue to explore the causal factors of nurse leaders' decision to quit.

Head, Back, Knees and Feet: Direct-Patient Care Nurses in Pain

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Aims: To explore relationships between the personal (e.g., age, sex, and health) and work demographics (e.g., hours in shift, patient load, and work setting) and the number of pain sites and levels of nurse pain.

Background: Internationally, the nursing profession is recognized as an occupation with a high occurrence of pain and musculoskeletal injuries. These can lead to decreased functional health and performance at work and home, as well as consequences for patient care, co-workers, and healthcare systems. In the US, we currently lack understanding of the prevalence and severity of pain in the registered nurse (RN) population. This is crucial to developing future targeted interventions to address nurse pain.

Methods: A cross-sectional survey of direct-patient care RNs (N=2,317) in the US were recruited using social media to complete an online survey. The survey included items on participant demographics, health status, number of pain locations and severity of pain. Descriptive statistics are reported in terms of frequencies, proportions, medians and interquartile range (Q1,Q3). Relationships between demographics and pain outcomes were assessed using non-parametric tests. Multiple linear regression models were used to assess relations between potentially modifiable work setting factors and pain outcomes while adjusting for relevant demographic factors.

Results: Majorities of participants were female (n=2,234, 96.4%), worked in hospital settings (n=1,835, 79.2%), had two or more years of current unit experience (n=1,974, 85.3%), and worked 12-hour shifts (n=1385, 59.8%). The median number of pain locations participants reported was 2 (2,3), and the median pain rating on a 1-10 scale at the highest rated pain site was 5 (4, 6). The median number of pain sites reported increased with age (Spearman's rho: 0.17, $P < 0.0001$) , as did highest reported pain level (Spearman's rho: 0.07, $P = 0.001$). In models adjusted for age and work setting, significant modifiable work factors associated with the number of pain locations were average patient load of 10 or more, working 12 or more hours in a regular shift, and working 25 hours or more of overtime per month. Significant modifiable work factors associated with highest reported pain level were average patient load of 10 or more and working 25 hours or more of overtime per month.

Implications: Nurses experience pain that is associated with modifiable work factors and demographic factors (e.g., age and years of experience). While nurse demographics cannot be addressed through interventions, it is possible to address shift length, patient load and overtime which may decrease nurse pain. Shift length, patient load and overtime have also been associated with negative patient outcomes; therefore, addressing these through organizational interventions may improve nurse health and patient care.

Reducing Workplace Violence: An Improvement Initiative in an Academic Medical Center

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Purpose: The purpose of this improvement initiative was to develop and implement a comprehensive employee workplace violence (WPV) program aimed at increasing WPV recognition, reporting, and response, and reducing WPV experienced by employees in a large quaternary academic medical center.
Background: From 2017 to 2018, WPV incidents in the organization increased by 34%, but a formal WPV prevention plan was lacking. These findings, with new state regulations, highlighted a need to reduce WPV through a standardized program including WPV recognition, reporting, response, prevention and education processes. Initiated in 2018, the effort was set in a 605-bed academic medical center with frontline clinicians and staff.
Brief Description of the Undertaking: The LEAN/A3 continual quality improvement method framed this initiative. In 2018, a WPV needs assessment was conducted with registered nurses, physicians, physical and occupational therapists, respiratory therapists, dieticians, social workers, and case managers. An interdisciplinary team defined WPV as any physical assault, threatening behavior, or verbal abuse in the workplace; WPV can be committed by current or former clients, patients, or employees, individuals associated with a current or former employee, or by those with no hospital association.

Key drivers necessary for successful WPV program implementation were identified: increased recognition, prevention and mitigation strategy awareness, response and reporting knowledge, and interdisciplinary oversight informed three WPV educational live streaming webinars and a WPV one-page training document that was disseminated organization-wide. Signage reinforced shared understanding among care teams, patients and visitors.

To address immediate WPV, the Distress Activation Response Team (DART) program was piloted on five medicine units. When activated, an interprofessional team deploys to discuss a behavioral plan of care with the involved individual(s) and initiate next steps. In 2019, DART was implemented on all medicine units.

In August 2020, a train the trainer method was implemented to educate frontline nursing staff. In September 2020, a WPV response program was created from DART and expanded to all in-patient nursing units. Instrumental to this roll-out and sustainability was unit-based leadership, a DART one-page training document, and creation of a Workplace Violence Committee.
Assessment of Findings: From September 2020 through August 2021, 178 care team members attended one of the three WPV classes, and there were 103 DART activations across in-patient units. Post-intervention WPV reports (M = 10.85, SD = 3.31) were significantly increased compared to pre-intervention WPV reports (M = 3.45, SD = 2.84), $t(18) = 7.2$, $p < .001$. The true improvement in WPV reporting was greater than 5.61 reported incidents per month.
Conclusions: This project yielded crucial WPV infrastructure that increased recognition, reporting, and response to WPV through education, DART, and program sustainability, and facilitated a safer environment aligned with strategic goals of ensuring the workplace is free of fear and prioritizes safety. Coordination and commitment across departments contributed to a culture in which WPV is not tolerated. Future expansion of the WPV program throughout the organization, continual program monitoring and evaluation, and effective technology use will be key in addressing WPV, identifying program successes, and delineating future areas of WPV study.

Understanding Organizational Response by Email Text Networks and Sentiment Analysis

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Purpose/Aims: This work aims to explore the content and sentiment of organizational emails from an academic pediatric hospital utilizing text networks and sentiment analysis.

Rationale/Conceptual Basis/Background: The COVID-19 pandemic necessitated appropriate response from healthcare organizations. Integral to the response aimed at staff were organizational emails. Emails are an efficient mode of communication utilized to relay important information. Capturing and describing email communication to pediatric nurses provides understanding of an organization's response to the pandemic. This understanding can inform preparation of pediatric nurses for future critical events. Text networks and sentiment analysis can be utilized to topically and qualitatively recognize information for future strategic communication planning or to triangulate nurse experiences.

Methods: This study was conducted in an academic pediatric hospital in the western United States. Organizational emails directed to nursing leaders were captured from March 2020 to March 2021. These emails included COVID-19 updates, operational information, and other essential information. A nurse leader collected these emails. The main aim of this work was to describe the content and sentiment of these emails. To describe the content, text networks were utilized. This methodology creates a co-occurrence network of words where each word is connected to another based on their frequency of appearance within the same email. From this co-occurrence network, the Louvain community algorithm was conducted to divide the network into smaller tightly connected sub-networks. These communities were manually coded based on the words within the sub-network and represent the topic of the emails. Sentiment analysis was conducted from an overall and topical perspective. From the overall perspective, a lexicon-based algorithm known as sentimentR was utilized to obtain sentiment of sentences from the emails. Any score greater than 0 is considered positive sentiment. From the topical perspective, multiple sentiment analysis methodologies were used to assign sentiment to the words within each community. Community sentiment was assigned based on consensus on sentiment results from investigators. Each community was assigned a positive, neutral, or negative sentiment. Text networks and sentiment analysis was conducted on emails for each month.

Results: A total of 336 emails were collected over March 2020 and March 2021. Most emails were sent in April 2020 (n = 80). On average, there were 11 communities identified through text network methodology. The topics representing these communities ranged from infection mitigation, employee benefit changes, and diversity, equity and inclusion topics. Overall average sentiment was 0.20, suggesting positive sentiment. Topical sentiment suggested that topics involving IT were mostly negative while topics dealing with infection mitigation ranged from neutral to negative depending on the month. Further, topics evolved and changed as the pandemic evolved.

Implications for Translation to Practice/Further Research/Policy: This work demonstrated the use of text network and sentiment analysis on organization emails to inform organizational response to the pandemic. Early in the pandemic, there was an abundant of information communicated through emails. Further work is needed to triangulate these results with nursing experiences to inform future strategy on communication.

Evaluating Evidence-Based Practice Knowledge/Skill in Acute Care Nurses

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Background: Evidence-based practice (EBP) has long been recognized as a key solution to delivering safe, high-quality care. Acute care nurses need EBP competencies to integrate relevant research findings into care when congruent with patient preferences/values. No objective method is available to assess nurses' knowledge/skills that comprehensively captures all five steps (i.e., inquire, acquire, appraise, apply, evaluate) and three components (i.e., clinical expertise, research evidence, patient values/preferences) of EBP. With patient outcomes at stake, competency evaluation is critical so educational interventions can be tailored to advance EBP proficiency of nurses over time.
Purpose/Objective: The Fresno test is one valid method to objectively evaluate EBP knowledge/ skills however, it has only been validated with family medicine physicians and physical/occupational/speech therapists. The 14-item Modified Fresno Test was later adapted for acute care nursing (XXXX, 2018) and tested with nurses from novice-to-expert. Six items required revision to produce a valid and reliable EBP knowledge test. Thus, the specific aim of this study was to revise these items and re-test a revised version of the *Modified Fresno Test-Acute Care Nursing*.
Methods: In *Phase 1*, the Delphi technique was used with a panel of 10 national EBP experts to revise the six items. Experts were engaged in multiple rounds of revision until at least 0.78 agreement was reached for each item. Content validity indices for revised items ranged from 0.83-1.0. Scale CVI for the revised test was 0.92. In *Phase 2*, a cross-sectional sample of 90 acute care nurses (i.e., novices, masters, experts) was recruited to complete the test as done in other Fresno validation studies (McCluskey & Bishop, 2009; Ramos et al., 2003; Spek et al., 2012; Tilson, 2010). Nurses were recruited via national listservs and snowball sampling. Two PhD prepared nurses with EBP expertise independently scored tests using the standardized scoring rubric.
Results: Eighty-six percent of items (12 of 14) exceeded a priori psychometric cutoff criteria (IDIs > .2, CITCs >.3) for acceptability. One item with low IDI and ITCs was likely a sample specific finding as it met these criteria in the first validation study and thus, was retained. The second item also performed poorly in the initial study and was dropped. As a result, the final *Modified Fresno-Acute Care Nursing Test* includes 13 items, with a Cronbach of 0.76. Novice nurses scored lower than master and expert nurse across items. Most items discriminated well between cohorts.
Conclusion: The 13-item *Modified Fresno Exam-Acute Care Nursing* is a valid, reliable assessment of acute nurse's EBP knowledge/skills. Test items cover all five steps and three components of EBP. Nursing leaders, educators and researchers may use the 13-item test to evaluate effectiveness of EBP curricula to advance progression of acute care nurses' EBP knowledge/skill competencies in clinical practice and academic settings. It can also be used to objectively monitor acute care nurses' career progression in achieving competent levels of EBP, thereby advancing the Quadruple Aim: *Better patient outcomes at a reduced cost*, *improved patient experience*, and *higher nurse engagement*.

Funding: American Nurse's Foundation, grant number 431001

MEASUREMENT AND RESEARCH UTILIZATION

Getfit for CRC: Evaluation of an NP-Led Program to Improve CRC Screening in Primary Care

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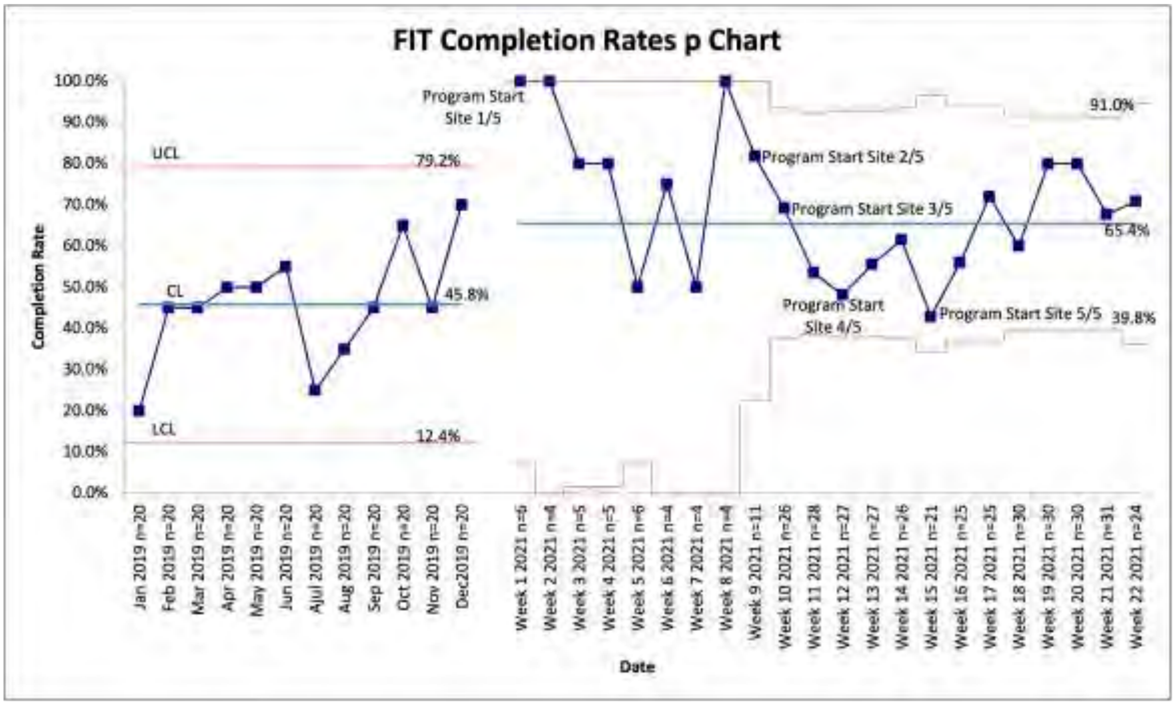
Purpose: The purpose of this quality improvement project was to perform a program evaluation using retrospective data from the *GetFIT for CRC* program which was implemented at a group of private primary care clinics in Southern California. This program used evidence-based strategies to improve annual FIT (fecal immunochemical testing) compliance for colorectal cancer (CRC) screening among eligible patients receiving care at these clinics.
Background: CRC is the second leading cause of cancer-related deaths in the United States, but early detection through screening can save lives. Multicomponent programs aimed at increasing CRC screening rates have been successful in a multitude of research studies. The national average CRC screening compliance is 68.8% (including all forms of screening options), yet at the group of primary care clinics where this program was implemented, the average FIT completion rate failed to even reach this benchmark at an average baseline rate of 45.8%.
Methods: Using the Logic Model framework, this program evaluation focused on assessing the changes produced by the strategies utilized in the *GetFIT for CRC* program through evaluation of CRC screening rates, effectiveness of phone and text reminders, and satisfaction of patients with the new process. The *GetFIT for CRC* program implemented the following changes to the FIT screening process: enhanced provider recommendation for screening, provided the FIT kit in office, offered a brief education highlighting the importance of the test, incorporated simplified language and easy-to-follow instructions for collection, handed instructions to patients by nursing staff, reduced steps for patient to complete FIT, and initiated reminder calls and texts.
Results: FIT completion rates were tracked weekly from March 2021 through August 2021, plotted onto a p chart, and compared to baseline rates from 2019 using IHI rules for special cause variation. Compared to the baseline average in 2019 of 45.8% (N=240), the completion rates increased to an average of 65.4% (N=399) after 5 months of implementation, which indicated that the program was successful. Patient satisfaction scores averaged between 8.75 to 8.97 on a Likert scale of 1(lowest) to 10 (highest), indicating high satisfaction with the process of FIT collection. However, phone calls (N=327) and text reminders (N=343) were not shown to improve screening completion rates; therefore, ongoing process improvement on this feature of the program is being conducted.
Implications: Research consistently supports programs that utilize multiple modalities to increase CRC screening. The *GetFIT for CRC* program was effective in improving CRC screening compliance via FIT in primary care clinics.



Translation and Validation of English Version of EBP Competence Questionnaire

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Background: Valid and reliable tools must be implemented to measure nursing students' evidence-based practice (EBP) knowledge and skills that transfer to their practice once students become licensed Registered Nurses.

Objective: The purpose of this study was to translate and validate the English version of the Evidence Based Practice Competence Questionnaire (EBP-COQ) for undergraduate nursing students.

Methods: 279 students participated in this study. The EBP-COQ developed by Ruzafa-Martinez in Spain was used for data collection.

Results: The English version of the EBP-COQ was developed after some items were modified. The content validity index was 96.16%, indicating that all items were correlated with the measurement of EBP competence. The Kaiser-Meyer-Olkin (KMO) value was 0.78-0.87, suggesting that the correlations between items were high. The Cronbach's alpha was 0.83, indicating good internal consistency. In confirmatory factor analysis, a three-factor solution was extracted with an eigenvalue greater than one, indicating a good measure of what it purports to be measuring.

Conclusion: The EBP-COQ translated in English language is a valid and reliable tool for determining student knowledge, skills and attitudes towards EBP.

Funding: Alpha Kappa-at-Large Chapter of Sigma Theta Tau International Honor Society of Nursing

MEASUREMENT AND RESEARCH UTILIZATION

Development and Validation of a Visual White Matter Hyperintensity Rating Scale

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Purpose: To describe the methods used to develop and validate a visual white matter hyperintensity (WMH) rating scale used in the neuro-imaging sub-study of the Sacramento Area Latino Study on Aging study (SALSA).

Background: WMHs represent areas of abnormal white matter in the brain, predominantly defined by their physical attributes seen on brain magnetic resonance imaging (MRI). The prevalence of WMH correlates with increasing vascular risk factors, such as hypertension, diabetes, smoking, and age. Clinically they are associated with conditions such as progressive cognitive impairment, depression, and stroke.

Methods: A cross-sectional study nested within the SALSA cohort study. Based on multi-stage cognitive screening examination, a stratified sample of 137 subjects 65 years or older was selected for MRI. MR images were collected on a GE 1.5T Signa Horizon LX Echospeed system using a standardized protocol. A reference set of images (the gold standard) was obtained from the University of California, San Francisco with known amounts of WMH based on the use of a semi-automatic segmentation program. Eight reference images were selected to represent the range of WMH expected based on content and construct validity as determined by a panel of neuro-imaging experts. These images were then used as visual anchor points to develop a visual analog scale ranging from 0 to 100%. Two raters were then asked to estimate the amount of WMH on a set of 21 additional reference scans using the new scale. Rater 1 rescored each scan twice at least 2 weeks apart. Results by each rater were compared to known volumes of WMH for each scan. This was followed by determining the intra-rater and inter-rater reliability. Agreement was measured using regression, Wilcoxon signed–rank test, and ANOVA. To address external validation, a series of bi-and multivariate statistics was used to assess the agreement of WMH on the SASLSA scans with known known clinical associations.

Results: Both raters had similar results when comparing their scores to known volumes ($p<0.01$). Rater 1 regressed against the gold standard had a slope of 0.98 ($p<0.01$), and y-intercept near zero (0.279; $p=0.83$). There was strong precision ($r = 0.98$), and a strong correlation ($r^2 = 0.952$; $F= 358.4$; $p <0.0001$). Intra-rater reliability was strong (rater 1, $r = 0.941$ and $r^2 = 0.88$; $p<0.001$) with a non-significant Wilcoxon Rank Sum statistic; $p= 0.7938$) as was inter-rater reliability (Wilcoxon Rank Sum statistic; $p=0.118$). ANOVA demonstrated no group differences between the means for the four sets of readings ($p < 0.001$). Of the 119 completed and usable SALSA scans, distribution of WMH resembled the reference data set (mean WM percentage being 13.7% (± 19.8 SD), with a range of 0-85.0%. WMH increased with age, a decline in hippocampal volume, cognitive decline, and with dementia ($p<0.05$).

Implications: The new scale provides a single, unidimensional quantitative summary of WM pathology that can be used both as predictor and an outcome in epidemiologic studies. Besides being inexpensive and easy to use, the tool is psychometrically sound, with good reliability, repeatability, and validity.

Funding: NIH AG 10129 and 2975

Parents' Perceptions about Offspring's Mental Health Care

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The two most often identified mental health issues in adolescents are anxiety and mood disorders, including depression. The level of undetected mental health disorders in this population remains extraordinarily high. Parents comprise a key factor in adolescents' accessing mental health care. The overall purpose of this research is to generate new insights about parents' beliefs and attitudes toward mental health care for their adolescents with anxiety, depression or both. The specific aims of this study are 1) to identify parents' beliefs and attitudes about mental health care for their adolescents and 2) to describe what impacts parents' support for mental health care treatment for their adolescents.

The theoretical rationale used is the *Social Ecological Model* (SEM) (Bronfenbrenner, 1977). One of the advantages of the SEM is that it demonstrates the nonlinear relationships between parents, facilitators, barriers, and access to adolescent mental health care. This investigation focuses on the elements of these relationships and the interactions between the microsystem, mesosystem, exosystem, and macrosystem.

This qualitative study, informed by interpretive description, explores parents' perceptions of their offspring's mental health care. A convenience sample, with snowball techniques applied, consisting of 18 parent participants, was recruited from northeast Denver, Colorado. Initial participant recruitment was through community newsletters, social media, and Denver ONLINE High School. Criteria for parent inclusion were: having an adolescent aged 12–17 years with current anxiety and/or depression, speaking English, being over 18, and being willing to share their experiences. Semi-structured, face-to-face interviews were conducted at libraries or by phone. Transcripts were analyzed using both inductive and deductive approaches, and demographics were analyzed via simple quantitative methods.

An overarching theme emerged that parents experienced mental health as a journey for their adolescents, with the parents there for support. Several main themes supported the notion of the adolescents' journey, including parents functioning as their adolescents' advocates, and being a parent to adolescents with anxiety or depression is emotionally difficult. Other prevalent themes included parents believing that mental health care can be helpful. Additionally, parents believed mental illness should be treated in the same way as medical illness, and that medication can be helpful for treatment. Significant aspects from the findings can be used to educate, assist nurses, and enhance their nursing care of adolescent and their parents. Nurses need to familiarize parents with aspects of mental health care by educating parents about the signs and symptoms of anxiety and depression.

This study highlighted the complex relationships between three key systems: family system, school system, and the mental health care system, as they relate to anxiety and depression for adolescents. Future research should therefore be framed by all three systems. Improved systems must be developed for connecting adolescents and parents into this journey and supporting parents and address how our societal systems can improve the journey. Implications for further research include: how systems can be improved to accomplish treating mental health care as medical health care, interview more diverse parents, and replication of the study with the same parents post-COVID stay-at-home orders

Depression and QoL of Parents with Children with Chronic Illnesses

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Background: Parents of children with a chronic illness have now adopted the role of caregiver often providing a level of care that once was only possible in a hospital setting. Researchers have shown parents of children with chronic illnesses are more likely to experience stress, anxiety, depression, and post-traumatic stress disorder. Current literature indicates over 50% of parents reported depressive symptoms and only half reported coping adequately. In addition, psychological stress and QoL of parents influence the level of adjustment to the illness of their child and family functioning. Furthermore, it has been shown that different demographic factors impact the level of stress and QoL rating parents may experience.

Purpose: The aims of this study were threefold, (1) to describe depression and QoL in parents caring for a child with chronic illness, (2) describe correlation between level of depression and QoL, and (3) determine whether demographic variables (family size, time since diagnosis, number of providers seen, age of child) affect depression and QoL.

Methods: An exploratory, descriptive-correlational study design was used for this study. The questionnaire used in this study included 14 demographic questions, Beck's Depression Inventory (BDI), and the WHO Quality of Life Scale Brief (WHOQOL-BREF). A convenience sample of parents of a child with chronic illness was recruited through a local non-profit organization in the Northwest. Following approval by the institution's Institutional Review Board (IRB), parents were invited to participate in the study via email.

Results: Beck's Depression Inventory revealed a high prevalence of depression among parents of children with chronic illnesses. Over half (62%) of our 31 participants reported some level of clinical depression ranging from Borderline (6%), Moderate (31%), Severe (12.5%), and Extreme depression (12.5%). The mean domain scores from WHOQOL-BREF ranged from (31-66) higher scores indicating a greater rating of QoL. Depression and QoL were found to be moderately negatively correlated, [r (31) = -0.579, p = <0.001]. Demographic factors such as number of providers seen and time since diagnosis had no effect on QoL or depression. There was a significant effect of depression and family size [F (2 , 29) = 5.75, p = 0.01].

Implications: Although the results of this study are consistent with other studies, it is distressing the number of participants experiencing severe and extreme levels of depression. The magnitude of the results of this study heighten the need for adequate care and resources for parents of children with chronic illnesses. Children with chronic illnesses are seen in appointments with their parents which allows nurses opportunities to utilize family centered care principles. It may be useful to implement screening tools for early identification of feelings of depression and decreased QoL. Furthermore, nurses who have frequent contact with these families can play a role in timely check-ins with parents to assess their mental wellbeing and offer further resources and support as needed.

Funding: Undergraduate Research and Creativity Activities - Boise State University

Stress Predicts Depression in Heart Failure Regardless of SES or Ethnicity

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Purpose: The purpose of this pilot study was to examine socioeconomic status, ethnicity, stress, and inflammation in predicting depression in heart failure (HF) patients.

Background: Depression is an established comorbid in HF that increases risk of heightened inflammation, rehospitalization, and increased morbidity and mortality. Disturbances of the pro- and anti-inflammatory and acute reactive proteins production is well documented in HF, depression, and stress. Low socioeconomic status (SES) is a common source of stress and a risk factor for depression. Studies has shown that Hispanics have lower SES as measured by income and education. Thus, this ethnic group, particularly those with HF may be at higher risk for depression. However, the relationship between depression, SES, and stress remains poorly understood in this population.

Methods: This pilot study employed a descriptive, cross-sectional design. Institutional Board Review and participants' consents were obtained. The sample consisted of 55 HF patients (74.5% male; 31% Hispanic) with a mean age of 71.62+/-11.33 years who were assessed for depression and perceived stress (PS) using the PHQ-9 and PSS, respectively. Data on education levels and yearly income were used as indices of SES and serum CRP samples were collected to assess inflammation. Data was analyzed using Mann-Whitney U-test and chi-square to compare Hispanics and non-Hispanic Whites (NHW) on study variables. Pearson bivariate correlation and linear multiple regression were used to examine the relationship between depression with SES, stress, and CRP.

Results: Hispanics were younger and had lower education and income levels than NHW. No significant difference was found between both groups on depression, stress, and CRP. Depression was only correlated with stress (r=.42, *p*=.00) and NYHA (r=.26, *p*=.05). Independent of age, gender, ethnicity, and income, NYHA (b=.32, *p*=.03) and PS ((b=.43,*p* =.00)) remained as predictors of depression. When education replaced income in the regression analysis, these two variables (NYHA: b=.36, *p*=.03 and PS: .42, *p*=.00) continued to independently predict depression. Hispanic ethnicity, SES, and CRP did not contribute to the variation of depression severity.

Implications: PS and NYHA are independent predictors of depression in HF regardless of ethnicity and SES. To improve outcomes, it is imperative that nurses address disease severity as well as stress in their assessment and treatment of depression in these patients. Further research is needed to better understand sources of stress in HF before effective interventions can be implemented, especially in cultures, which stigmatize depression and use of antidepressants.

Chronic Fatigue Predicts Hospital Nurse Turnover Intentions

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Purpose: To determine the impact of specific workforce engagement factors on hospital nurse turnover intentions during the coronavirus pandemic.
Background/Conceptual Basis: Nurse turnover intentions are impacted by occupational fatigue and burnout, which is differentially impacted by fatigue, meaning and joy in work, and work-related resilience. This study builds on a prior study that found meaning and joy in work mediated chronic occupational fatigue which predicted nurses' intention to leave their organizations among nurses from two midwestern hospitals (Rutledge et al., 2021).
Methods: 151 nurses from a southwestern Magnet hospital completed online surveys during April 2021. Measures included demographic and turnover intention questions and psychometrically sound tools evaluating occupational fatigue, meaning and joy in work, resilience at work, and burnout. Path analyses evaluated relationships among variables.
Results: Nurse respondents came from all areas of the hospital and all nurse roles. Most nurses were female, well educated (87% BSN+), and ranged in age from 24 to 73 years. Most reported being staff nurses (68%). Nine percent indicated a likelihood of leaving the organization with 6-12 months. Chronic occupational fatigue was the only significant predictor of nurse turnover intentions. While strongly associated with emotional exhaustion and depersonalization (burnout components), burnout did not predict turnover intention. High levels of chronic fatigue predicted lower meaning and joy in work and lower work-related resilience. While significantly correlated, meaning and joy in work and resilience did not predict total burnout scores when analyzed in causal models.
Implications for Translation to Practice/Further Research/Policy: Chronic fatigue is a factor not measured in most turnover/attrition studies and is therefore missed as a potential predictor. Valuable information would be obtained if future research included occupational fatigue measures and if longitudinal studies could track fatigue over time and evaluate fatigue-ameliorating interventions. In practice settings, nurse administrators should focus their efforts on factors such as chronic occupational fatigue that are likely to impact nurses' decisions to leave their positions.

Rutledge, D. N., Douville, S., Winokur, E., Drake, D., & Niedzela, D. (2021). Impact of engagement factors on nurses' intention to leave hospital employment. Journal of Nursing Management, 29(6), 1554-1564.

Prayer, Resilience, Perceived Stress, and PTSD Symptoms in Medical Flight Crews

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Background: Medical flight crews are an understudied group of first responders who experience various stressors that are unique to their profession. These stressors disproportionately increase their risk of developing post-traumatic stress disorder (PTSD) as well as other mental health conditions. Currently, little is known regarding the strategies medical flight crews use to cope with their occupational stressors.

Purpose: The purpose of this study was to understand and describe the relationships between relational prayer, resilience, perceived stress, and post-traumatic stress symptoms among flight nurses and flight paramedics.

Methods: This study employed a mixed-methods approach with convergent design. Correlational and regression analyses were applied to quantitative data and thematic analysis was used to identify, code, and categorize patterns into themes from qualitative data. Matrix analysis techniques were used to examine quantitative and qualitative data results concurrently, in a convergent manner. This methodological triangulation provided a comprehensive understanding of the complex phenomena involved in the everyday practice and health experiences of medical flight crews as they relate to relational prayer, resilience, perceived stress, and PTSD symptomatology. The quantitative element of the design allowed for data summaries yielding generalizations based on statistical estimations. The qualitative element provided rich, descriptive detail about the human context for interpreting quantitative results.

Findings: A total of 246 participants completed an online survey and were included in the final analysis. Multiple regression analyses revealed the best set of independent predictors for perceived stress are relational prayer, resilience, gender, and ethnicity ($R=.514$, $R^2 = .265$, Adj. $R^2 = .236$, $p < .001$). The best set of predictors for PTSD symptomatology are resilience and previous mental health diagnosis ($R=.438$, $R^2 = .192$, Adj. $R^2 = .182$, $p < .001$). Most participants (56.91%) reported they engage in relational prayer. Of those that pray, 71% reported they felt they were developing a relationship with the entity they pray to, making relational prayer a salient concept among those who pray. Engagement in relational prayer was found to be associated with decreased stress ($r = -.278$, $p = .003$) and with several themes identified through qualitative analyses: 1) Calming Effect, 2) Lightening Emotional Burdens, 3) Improved Clinical Competence, 4) Coping, 5) Open & Direct Communication, and 6) Relationship Building. Qualitative analyses also revealed that engaging in prayer increased their resilience and decreased any PTSD symptoms. Data collection for this study occurred approximately three months after the Coronavirus Disease 2019 (COVID-19) pandemic had spread world-wide. There was a notable link between pandemic stress and perceived stress ($r = .494$, $p < .001$) and PTSD symptoms ($r = .340$, $p < .001$).

Conclusions and Implications: Flight nurses and flight paramedics belong to an elite group of first responders who experience consistent stress responding to traumas, disasters, and emergency situations. This study has elucidated the significance of relational prayer as a potentially effective stress relief modality. As research investigating other spiritual practices such as meditation and mindfulness grow, so should research investigating prayer. For many, it is a meaningful centuries old practice that deserves contemporary scholarly attention.

Advance Care Planning from Marginalized Patient Perspectives: Transcend Stereotype

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Purpose: To understand meanings and approaches for advance care planning (ACP) from perspectives of persons from marginalized populations.
Background: ACP is recommended to assist persons to prepare for future health care decisions and deliver goal-concordant care. Current ACP practice is mostly based on White perspectives, and uptake of ACP among marginalized populations is low resulting in many receiving treatments that may not align with their values. Current ACP approach may not be acceptable or meaningful to other populations. There is a need to explore ACP approaches that are meaningful, acceptable, and equitable to all.
Methods: We conducted 15 qualitative interviews using interpretive phenomenology. Participants with serious illness from marginalized groups were recruited from primary care clinics: 10 women and 5 men; 7 Black, 4 Asians, 1 American Indian, and 1 Latina; 1 LGBT person; and 2 immigrants with limited English proficiency. Most Interviews were conducted via telephone. Average interview time was 42 minutes. Interviews were audio recorded, transcribed verbatim, and analyzed using hermeneutic analysis method described by Benner (2008). IRB approval was obtained before interviews were conducted.
Finding: Participants' perception about ACP varied based on their past experience related to serious illness or end of life. Participants who had experienced being seriously ill or observing what end-of-life care looks like tended to have clear ideas about what future care they wanted and were willing to engage in ACP conversations. Participants who had not had past experiences related to serious illness or end of life found it hard to imagine future care. They had no idea what it might be like, therefore they tended not to have ACP conversations. Willingness to have ACP conversations with healthcare professionals was affected by their relationship with their care providers. If they had a trusting relationship and believed that the provider's intensions for ACP was to "*know me better to treat me better*," they were more open to ACP conversations. Yet, many participants mentioned that healthcare professionals are often busy, and if their providers did not take time to explain what to expect and *listen* to their concerns, participants tended to refrain from engaging in meaningful ACP conversations even if they had a relatively good rapport. Although cultural or religious beliefs affected individual preference for future care and/or decision-making style, each participant's perception and engagement in ACP was driven by their past experiences rather than racial or cultural stereotype.
Conclusions: Values, preferences, and engagement in ACP are formed by past experiences, and each person's past experience is different. Our findings suggest that taking time to build relationships and showing genuine curiosity to learn who the person is beyond the stereotype would be the best approach to facilitate ACP conversations with all people.

Funding: Rita & Alex Hillman Foundation

Discrimination and Quality of Life Among US Minority Nurses during the Pandemic

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Purpose: Guided by the Vulnerable Populations framework that argues that health status reflects the dynamic interplay between resource availability and relative risk, this study investigated discrimination experience and factors associated with quality of life (QoL) among minority nursing staff in the United States.
Background: The COVID-19 pandemic has negatively impacted individuals and communities globally. Frontline healthcare providers, particularly racial/ethnic minority nursing staff are at risk of developing unfavorable health outcomes due to the greater probability of experiencing race-based and related discrimination.
Methods: We recruited a convenience sample of nursing staff including minority nurses and certified nursing assistants via professional networks. An online, anonymous survey consisting of reliable and valid measures was used to assess racial discrimination, fear of COVID-19, perceived risk of infection, resilience, social support, and QoL. Each participant received an eGift card via email. We used descriptive statistics to describe the sample and key variables; independent t-test, $\chi 2$ and multiple regression were conducted to compare racial group differences and variables contributing to QoL of our target population.
Results: A diverse sample of 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) completed the survey. About 83.5% of participants were females, 80% between 26 and 40 years old, 35.6% had BSN, and 26% working in acute settings (e.g., ED, ICU). While the entire sample reported high prevalence of discrimination experience (60% witnessed, 28.3% experienced), Latinx nurses reported the highest percentage of both witnessed (79%) and experienced (46%) discrimination associated with race, and the worst QoL. In the regression models, witnessed discrimination had a significant impact on worsened QoL across all racial/ethnic groups while perceived risk of getting infection was significantly associated with worsened QoL in four of five groups. Higher level of resilience and social support, on the other hand, were significantly associated with better QoL in four out of five racial/ethnic groups.
Implications: Nursing staff comprise the largest group of healthcare providers who play a pivotal role in taking care of patients during the pandemic. This research highlights a high prevalence of race-based discrimination witnessed or experienced by minority nursing staff; and, other factors associated with their QoL. The findings will guide the development of approaches that address discrimination, perceived risk, and strengthen resilience and social support to promote minority nursing staff's QoL.

Funding: Arizona State University

The Impact of COVID-19 on the Quality of Life of Native American Nurses

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Purpose: Guided by the Vulnerable Populations Framework, this study aimed to examine the interrelationships among resource availability, relative risk, and health status among Native American (NA) nursing staff in the U.S. amid COVID-19 pandemic.

Background: Nursing plays an important role in achieving health equity, as nursing staff is often the first and only point of care in under-resourced communities. However, the work-related burden due to the pandemic has been a cause for nursing staff to leave the profession at increased rates. As a result, existing nursing workforce shortages have worsened, and nursing staff are at higher risk of experiencing poor quality of life (QoL). A further complicating matter is the disproportionate impact on ethnic minority nurses during the pandemic, who often experience high burden in working with disenfranchised populations. Evidence shows that NA nursing staff are more likely to work in tribal communities where, even before the pandemic, some of the largest health disparities in the U.S. exist. As it stands, only 0.3% of the active nursing workforce identifies as NA. It is imperative to protect the health and well-being of NA nursing staff who can deliver culturally-relevant care to NA communities. Little research, however, has examined the impact of the pandemic on the QoL of NA nursing staff.

Methods: We conducted a secondary analysis using time 1 data from a parent longitudinal survey study. A convenience sample was recruited through professional networks. An online, anonymous survey consisting of psychometrically well-validated instruments assessed relative risk (i.e., perceived racial discrimination, fear of getting COVID-19, perceived risk of getting COVID-19), available resources (i.e., social support and resilience), and health status (i.e., QoL). We used descriptive statistics to characterize the study sample, and conducted hierarchical multiple regression to investigate the role of resource availability and relative risk on health status among NA nursing staff. Model 1 included demographics (i.e., age, gender) only; Model 2 added nursing characteristics (i.e., education, work setting, professional role), and Model 3 added theoretical variables, while controlling for demographics and nursing characteristics variables.

Results: In this target sample ($N = 69$), the mean QoL score was 61.9 out of 100 and 75.4% reported witnessing or hearing about incidents of prejudice and discrimination against NA. After controlling for demographics and nursing characteristics, we found that greater level of witnessing discrimination ($B = -15.31$, $SE = 4.24$, $p < .001$) and perceived risk of getting COVID-19 ($B = -4.28$, $SE = 1.47$, $p < .01$) were associated with lower QoL. Other theoretical variables were not significantly associated with QoL. In terms of effect sizes (R-squared), Models 1, 2, and 3 explained 8.3%, 9.6%, and 43.5% of variance of the outcome, respectively.

Implications: Findings of this project address a gap in the literature examining the relationships among resource availability, relative risk and NA nursing staff's QoL. To protect an already scarce resource, the present study suggests that workplace practices and policies should mitigate race/ethnicity-based discrimination and the perceived risk of getting COVID-19 infection among NA nursing staff during the pandemic.

Weight Bias Measure in Undergraduate Nursing Students

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Purposes: The purpose of this study is to measure weight bias in incoming pre-licensure nursing students.

Rationale/Background: The link between obesity and poor health outcomes has been strongly established in the research. Yet, stigma against people with obesity is prevalent in healthcare. Weight bias has an adverse effect on health outcomes. These outcomes include a delay in seeking care, mistrust of providers, and increased patient stress levels. If doctors, nurses and nursing students continue to have explicit biases towards people with obesity then how can we expect the health outcomes for this patient population to change?

Methods: Eighty first-semester nursing students were given a QR code to voluntarily participate in a survey measuring weight bias during their orientation. The survey included demographic questions, the Fat Phobia Scale, Beliefs About Obese Persons Scale (BOAP), and qualitative questions. The Fat Phobia scale measures explicit bias by having participants mark how they would describe a person with obesity using sets of opposing descriptors such as lazy vs. industrious. The BAOP scale is a 10 item Likert scale that asks how much the participants agree/disagree with statements about people with obesity. Qualitative questions asked, "What are your thoughts about working as a nurse caring for an obese patient; Is there anything else you would like to add?" Informed consent was given. No incentives for completion of the survey were provided.

Results: Forty students completed the survey. Preliminary analysis of the data show that many students believe that obesity is caused by a lack of willpower, patients who are obese overeat and do not exercise enough, and are often lazy. Data also indicates that the majority of respondents felt that people who are obese are unattractive, have poor self-control, are inactive, slow and have no endurance. Emerging themes from qualitative questions included: a.) treatment of all patients should be the same and b.) more education is needed for these patients. These concerning trends in the preliminary data demonstrate preconceived notions about patients with obesity and a lack of individualized, patient centered approach to care.

Implications for Translation to Practice: Goals of the American Association of Colleges of Nursing (2021) include advancing diversity, equity and inclusion in nursing education by means of improving education quality and addressing "pervasive inequality in healthcare'. Weight stigma and discrimination is a preventable inequality in healthcare. Addressing the need for education, examining existing bias, and implementing tools to reduce bias can improve health outcomes for people who are obese. Future steps will include providing students opportunities to work with people experiencing obesity to reduce stigma.

Funding: The Jody DeMeyer Endowment for funding of the undergraduate research assistant program, Boise State University.

Perceptions of Obesity in Nursing Students after a Simulated Experience

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Purpose: This research project sought to decrease perceptions of weight bias in pre-licensure BSN nursing students using a simulated experience with a patient with obesity.

Background: People with obesity experience weight bias from health care providers. This leads to patients delaying care, not trusting the healthcare system, and experiencing poor communication with providers. This causes poor health outcomes. Research involving medical students interacting with standardized patients who were obese was associated with decreased stereotyping and increased empathy towards people experiencing obesity.

Description of the Project: A simulation scenario was created with the objectives based on effective communication and completing a focused physical assessment. In the scenario, a patient with obesity presented with respiratory complaints. The patient sought care for her respiratory issues three days earlier and was told to lose weight. Her respiratory concerns were not addressed. In the scenario, she is not feeling well and is frustrated. The scenario was developed, facilitated, and debriefed using the INACSL healthcare simulation standards of best practice.

A group of 77 second semester students in a pre-licensure Bachelor of Science in Nursing program were given a pre-survey which included questions from the Fat Phobia Scale, the Beliefs About Obese Persons Scale, and qualitative questions about weight perceptions. During the first week of school, students participated in the simulation scenario and then were given a post-survey with the same set of questions.

Six students completed the pre-survey while 68 completed the post-survey. Due to lack of participation in the pre-survey, quantitative information is limited. However, results from the qualitative data are promising. Themes from the qualitative analysis include the importance of listening to patients, being adaptable in care, and focusing on the patient's concerns.

Outcomes Achieved: Simulation scenarios developed and taught using simulation best practices could improve empathy and communication skills among nursing students. For example, 29 students commented on the importance of communication, especially listening and paying attention to non-verbal cues in patient care.

Next Steps: Simulation could be an effective means of decreasing bias in nursing students. Researchers will repeat the study with a different group of students and will attempt to increase the number of pre-survey responses. Results of this study will be compared within the group and between groups. Future studies will be conducted to determine the effect of simulation decreasing weight and other types of bias. Decreasing bias promotes effective patient-centered care.

Funding: The authors would like to thank the Jody DeMeyer Endowment for funding of the undergraduate research assistant program, Boise State University.

A Simple Strategy for Inclusion: Correct Name Pronunciation

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Purpose: This presentation describes an initiative to promote an inclusive learning environment through the implementation of tools and strategies for correct name pronunciation. This initiative was part of a strategic goal to advance the culture of the School of Nursing community by cultivating respect for diversity and fostering equity and inclusion.

Rationale/Background: The Future of Nursing 2020-2030 Report identifies a diverse nursing workforce is 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, faculty and staff. As nursing education faculty and programs strive to increase the recruitment and retention of diverse students, the creation of a learning environment free from bias and discrimination is integral to achieving inclusion and belonging. Name mispronunciation has been identified as a microaggression that can interfere with an inclusive learning environment and a sense of belonging.

Brief Description of the Undertaking: The approach used in this initiative consisted of faculty development to learn about the impact of name mispronunciation on belonging and tools to promote structures for correct name pronunciation. Assessment of increased awareness and implementation of tools and strategies were measured through faculty survey. The faculty development approach included 1) showing a TEDX talk of a personal story of a college administrator their lived experience, helpful and unhelpful responses to name pronunciation, and strategies to promote correct name pronunciation; and 2) sharing resources for implementing name pronunciation tools within email and the learning management system (LMS). The tools allow for audio recording of a name and phonetic spelling.

Assessment of Findings/Outcomes Achieved: Forty-two faculty attended the faculty development and 28 completed the follow-up survey for a response rate of 67%. All respondents believed the presentation was useful and will change their practice as a nurse educator. Qualitative comments discussed the importance of demonstrating respect for students through correct name pronunciation and using personal strategies and tools to assist. 64% of respondents expressed that they plan to or already had implemented the name pronunciation tool into their email signature and 82% reported likewise for incorporating tools into the LMS. Respondents reported an increase in understanding that name mispronunciation may be considered a microaggression and an increased awareness of their own response to correct name pronunciation. Respondents reported the TEDX was meaningful and impactful to use a personal perspective to increase awareness.

Conclusion: It is critical that faculty recognize the power differential that occurs within and across academic learning environments. Educators have the ability to transform the learning environment into a space supportive of diversity or to perpetuate oppressive practices that contribute to othering and social isolation. Correct name pronunciation tools and techniques are simple strategies to promote a sense of inclusion. Faculty development for correct name pronunciation should be included in faculty orientation and resources should be readily available to support this inclusive practice.

Enhancing Ongoing Advance Care Planning in Mechanical Circulatory Support Patients

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Purpose: This qualitative study describes perspectives that patients with mechanical circulatory support expressed regarding opportunities and challenges for ongoing communication about advance care planning (ACP).

Background: When medical and surgical treatment options have failed, mechanical circulatory support maybe offered for selected patients with end-stage heart disease. Potential post-implant complications include stroke, device thrombosis, recurrent gastrointestinal bleeds, and renal failure. To address these issues in this highly vulnerable population, ongoing ACP is essential to enhance shared decision-making. Unfortunately, despite the incorporation of palliative care consultants in preimplantation work-up, the dearth of studies and clinical experience show a persistent deficiency of ongoing ACP.

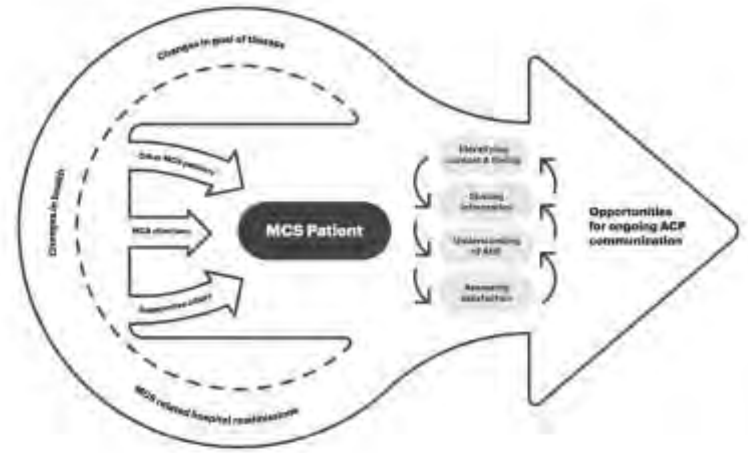
Methods: Grounded theory was used to examine perceptions of ongoing conversations about ACP. The 24 participants were English-speaking adults currently implanted with mechanical circulatory support; patients who were cognitively disabled or hospitalized were excluded. Flyers were used to recruit participants at two medical centers. A semi-structured interview guide was developed by authors and used for phone and in-person data collection. The first and last authors independently conducted three rounds of coding during data analysis. Constant comparison served to focus subsequent interviews on clarifying processes until data saturation was met.

Results: The most notable finding was that ongoing ACP communication was definitively absent. Despite most participants (n=19) having completed advance directives prior to implant surgery, they were unable to recall discussions about ACP after the mechanical circulatory support device was implanted. Importantly, when faced with hospital readmissions or serious changes in health, a lack of communication about future outcomes and ACP was evident. Four categories of opportunities and challenges were synthesized from the data: 1) Identifying context and timing for ACP occurred in situations of significant physical and mental device-related experiences; 2) Sharing information about advanced care was contingent upon identifying key individuals, such as mechanical circulatory support nurses. As one individual described, "You get to know a nurse. You have conversations with them and share things;" 3) Promoting understanding of ACP required assessing patients' perceptions of its purpose and content, as the process was often misunderstood and reduced to selecting surrogate decision-makers; 4) Assessing satisfaction revealed discrepancies between initial expectations and the realities of living with the device, which created new opportunities for ongoing ACP conversations. These categories are depicted in a framework (see Figure) situated within the context of living with mechanical circulatory support over time.

Implications for Practice/Further Research: Enhancing ongoing ACP for patients with mechanical circulatory support requires an iterative process of reassessing the four categories to engage individuals in communication about values and preferences and shared decision-making. Implications from this study include training and mobilizing mechanical circulatory support clinicians to practice primary palliative care. A high priority for future research is the development of ACP education and training materials specific to mechanical circulatory support clinicians. Nurses trained in mechanical circulatory support are in a prime position to promote justice and equity through bridging gaps in communication by facilitating ongoing ACP conversations.

Figure

Opportunities for Ongoing ACP Communication



Association between Habitual Sleep Duration and Hypertension Control in US Adults

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Purpose: The study examined the relationship between habitual sleep duration and hypertension control in adults with hypertension.

Background: Short sleep duration, defined by the American Academy of Sleep Medicine and Sleep Research Society (AASM/SRS) as a sleep duration of fewer than seven hours per day, has been identified as a risk factor for hypertension in observational and experimental studies. However, there is a paucity of data on the relationship between sleep duration and hypertension control.

Methods: This cross-sectional study used data from the 2015-2018 National Health and Nutrition Examination Survey (NHANES) for US adults who met the 2017 American College of Cardiology and American Heart Association (ACC/AHA) criteria for hypertension (systolic blood pressure (BP) ≥130 mmHg or diastolic BP ≥80 mmHg, or current intake of BP-lowering medications; *n=5,163*). Habitual sleep duration was the self-reported amount of sleep usually obtained in a night or main sleep period during weekdays or workdays. Hypertension control was assessed based on measured BP readings. A survey-weighted multivariable logistic regression model was fit to examine the association between habitual sleep duration (<6, 6 - <7, 7 - 9 (reference), and >9 hours) and hypertension control (BP <130/80mmHg versus ≥130/80mmHg), adjusted for sociodemographic factors (gender, age, race/ethnicity, nativity, education level, annual household income, employment status, and health insurance), health-related characteristics (body mass index, alcohol intake, cigarette smoking, physical activity, and history of cardiovascular disease, chronic kidney disease, diabetes, and depressive symptoms), and other sleep characteristics (symptoms of sleep apnea and history of seeking help for sleeping difficulty). Additional analyses tested for effect modification of the relationships between habitual sleep duration and hypertension control by age or gender.

Results: In the fully adjusted model, habitual sleep duration of <6 hours/main sleep period was associated with reduced odds of hypertension control (OR = 0.66, 95% CI: 0.46 – 0.95, *p value* = 0.027) when compared to 7 – 9 hours. No significant differences were noted in hypertension control between the reference group (7 - 9 hours) and the 6 - <7 group (OR = 1.41, 95% CI: 0.93 – 2.13, *p value* = 0.099) or >9 hours group (OR = 0.99, 95% CI: 0.69 – 1.42, *p value* = 0.941). There were no significant differences across age groups or gender in the relationship between habitual sleep duration and hypertension control.

Implications for Translation to Practice, Policy, and Further Research: The results show that a habitual sleep duration of <6 hours is associated with reduced odds for hypertension control, which indicates that promoting adequate habitual sleep duration may help improve hypertension control, especially in those who habitually sleep less than 6 hours a day. These findings point to the need for health care teams in primary care and other clinical practice settings to recommend and support adequate habitual sleep duration as part of the other recommended lifestyle interventions for hypertension management. Since this was a cross-sectional study, future longitudinal studies are recommended to examine how habitual sleep predicts BP changes and hypertension control in adults with hypertension.

Symptoms, Gut Microbiome, and Tryptophan in Irritable Bowel Syndrome

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Purpose/Aims: The purposes of this study were to investigate associations of Irritable Bowel Syndrome (IBS) presence, subtype, or symptoms with (1) microbiome diversity and (2) *Bifidobacterium* abundance and fecal microbiome functional capability for tryptophan synthesis and metabolism (estimated based on predicted microbial gene content) in healthy control women and women with IBS. Given the importance of dietary tryptophan intake we also examined group differences relative to tryptophan intake over a 3-day period.
Rationale: IBS is a disorder of gut-brain interaction that is associated with chronic abdominal pain. Growing evidence supports the notion that alterations in the gut microbiota composition affect the gut-brain axis by modulating tryptophan metabolism. TRP metabolites such as serotonin and tryptamine have multiple effects impacting pain perception, mood, gut motility, and sleep/arousal, all of which have been found to be altered in subgroups of patients with IBS. To date there has been little study of the interplay between gut bacterial taxa, their ability to participate in tryptophan metabolism and synthesis, and daily symptoms of IBS (pain, diarrhea).
Methods: Women with IBS and healthy controls were recruited through healthcare provider referrals and community advertisements. Women were eligible if they were between the ages of 18 to 45 years old. Women with IBS had a diagnosis of IBS from their healthcare provider and met the Rome III research criteria. Healthy control women did not have any moderate to severe disease or disorder. After informed consent, women completed a 28-day diary of symptoms, a three-day food record, and provided a stool sample for 16S rRNA analyses. Predicted functional profiles were generated from stool bacterial gene sequences using Tax4Fun2.
Results: The sample included 111 women with a mean age of 28.5 years (SD 7.5). Sixty-seven women had IBS and 44 were healthy controls. There were no differences in demographic characteristics or in alpha and beta diversities of fecal samples. The abundance of *Bifidobacterium* was reduced in the IBS relative to the control group. The IBS group had increased metabolic capacity for tryptophan and decreased biosynthetic capacity for tryptophan relative to control group. Among the IBS group, dietary intake of tryptophan influenced the relationship between *Bifidobacterium* and tryptophan metabolic capacity. For instance, there was a significant association between stool consistency and the *Bifidobacterium* abundance-tryptophan intake interaction ($p=0.001$, $q=0.042$). Although not significant after multiple comparison adjustment, there is some suggestion of an association of *Bifidobacterium* abundance and daily abdominal pain report ($p=0.050$ in the non-interaction model, $q=0.319$).
Implications: Tryptophan intake, microbiome composition, and microbial-based tryptophan biosynthesis and metabolism form a complex system that plays a role in IBS symptom severity. As such there is no single recommendation - for instance, increasing tryptophan intake or taking *Bifidobacterium* probiotics - that can be applied for all individuals with IBS. These results point towards the need for precision medicine approaches that incorporate knowledge of multiple factors such as dietary tryptophan intake and microbiome composition to develop personalized intervention approaches.

Funding: Funding for this project was provided by the National Institute of Nursing Research and the Office of Research on Women's Health (R01NR014479).

Comprehensive Self-Management Program Improves Work Productivity and Activity in IBS

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Background and Purpose: Individuals with irritable bowel syndrome (IBS) are more likely to miss work (absenteeism), have reduced work effectiveness (presenteeism) and experience activity impairment. Although work and activity impairment are well-documented in IBS, few IBS interventions have addressed impact on work productivity and daily activity. This study compared the effect of a comprehensive self-management (CSM) intervention program (incorporating cognitive behavioral therapy, diet education, relaxation) versus usual care on work productivity and activity impairment in adults with IBS.

Methods: This secondary data analysis used data from a randomized control trial of 160 adults with IBS. Participants ages 18-70 years old who had a healthcare provider diagnosis of IBS and met the Rome II criteria were included. After baseline assessment, participants were randomized into the CSM intervention or usual care. The CSM intervention included nine individual sixty-minute sessions delivered by a trained nurse practitioner based on an IBS Managing Symptoms Workbook. Daily diaries and Work Productivity and Activity Impairment: Irritable Bowel Syndrome (WPAI:IBS) data of absenteeism, presenteeism, work productivity and activity impairment were collected at baseline, 3, 6 and 12 months post-randomization. Mixed-effects modeling was used to compare the effect of CSM versus usual care on work- and activity-related outcomes.

Results: The majority of participants were middle-aged, female, self-identified white, college-educated and paid employees. Of the employed/student participants, 24.3 % reported any hours missed from work due to IBS based on the WPAI-IBS, and 7.2 % reported any days of work missed due to IBS on the 28-day diary. At baseline, neither demographics or WPAI:IBS subscales and diary-measured work productivity and activity status differed statistically between treatment groups (CSM, UC) (all $p > 0.05$). The effect of CSM was shown to be superior to usual care in improving WPAI:IBS and diary-measured presenteeism, work productivity and activity impairment with sustained effects up to 12 months post-randomization (all $p < 0.05$). Also, the CSM intervention was found to be particularly beneficial for IBS patients with greater baseline presenteeism, work productivity loss and activity impairment (all $p < 0.05$).

Conclusions and Implications: This study extends significant positive impacts of the CSM intervention for adult with IBS by reporting its effects on work productivity and activity levels, particularly for individuals with greater work and activity impairment. Individuals with IBS can benefit from the CSM intervention not only for reducing IBS symptoms but also improving work productivity and activity levels. The multifaceted CSM intervention enables individuals with IBS to select preferred strategies for their personalized set of symptom managements.

Funding: The parent study included in this secondary data analysis were funded by National Institute of Nursing Research, National Institutes of Health, USA (NR004142 and P30 NR04001). P-L. Y was supported by predoctoral scholarship from the Ministry of National Defense Medical Affair Bureau, the Republic of China (Taiwan). K.J.K was supported by the National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases Program, at the University of Washington (T32DK007742-22).

Midlife Women's Health and Wellness: A Descriptive Middle Range Theory

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Purpose: The purpose of this project is to describe a mid-range theoretical model of midlife women's health and wellness perception. This theory is a descriptive middle-range theory to inform intervention development and testing.

Description: Components of the theory include symptom experience (frequency, duration), symptom appraisal (severity, bother, interference), the use of self-care behavior(s), healthcare-seeking behavior(s), and the return to a state of balanced wellbeing (salutogenesis). The model also incorporates symptom appraisal balancers (e.g., interoceptive awareness, emotion regulation, attitudes) and symptom appraisal amplifiers (e.g., stress, anxiety, catastrophization, trauma) and menopausal transition stages.

Conceptual Approach: The conceptual approach to this project was informed by Meleis and Liehr and Smith's strategies to develop a middle-range theory. We employed clinical observations (induction through practice), defined concepts (concept building), and conducted preliminary research with diverse midlife women (n=5). We discussed each woman's lived experience and whether the concepts in the model were relevant or not. The model was iteratively revised based on input.

Logic Linking the Theory to Research: This framework is based on clinical experience and on a thorough review of the scientific literature on symptoms, biomedical and integrative health interventions and therapeutics.

Conclusions: The model is a useful heuristic to organize key concepts related to symptom experience, appraisal, and action during the menopausal transition and post-menopause. It includes biopsychosocial concepts relevant to midlife women and identifies specific junctures for intervention development and testing.

Examining the Patient Preference Aspect of the Patient Experience amidst a Pandemic

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Background: It has been nearly 20 years since the Institute of Medicine released the report *Crossing the Quality Chasm*, emphasizing the importance of patients receiving healthcare that is individualized and responsive to patient preferences. Since that time, the term *patient experience* has become a staple in healthcare vernacular. Personal preferences are a key attribute to the patient experience and shape all its aspects. The COVID-19 global pandemic necessitated patient isolation, visitor restrictions, and has skewed the patient experience for the sake of patient, staff, and community safety. Understanding the impact of the pandemic on patient preference measures has significance for organizations, nurses, and patients.

Study Population: The study population consists of inpatient adults ages 18 and greater, at an acute care community hospital in Southern California who completed an HCAHPS survey.

Purpose/Aims: This study examined patient perceptions of staff respecting their preferences as measured by a score of “always” on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) items 1, 2, 5, 6, and 20 prior to and during the pandemic. Specific aims included:

1. Describe socio-demographics, hospital length of stay, and personal preference aspects of the patient experience in the sample.
2. Describe relationships among the independent variables and the dependent variable.
3. Examine the amount of variance in perception of personal preference aspects of the patient experience accounted for by variables found to have statistically significant relationships.

Methods: A retrospective correlational comparative design study was conducted. Deidentified HCAHPS data ($n = 3{,}539$) was analyzed from October 2019 to February 2021. Descriptive statistics characterized the sample and chi square analysis was conducted to describe the relationships of the variables. Logistic regression identified the amount of variance for variables that had statistically significant associations

Results: There were no statistically significant differences in personal preference questions among patients hospitalized prior to and during the pandemic. During the pandemic, there was a significant relationship between: a top box score was on HCAHPS question two “During this hospital stay, how often did nurses listen carefully to you?” and a patient’s length of stay ($\chi(4) = 21.91$, $p < 0.05$), a patient’s educational background ($\chi(5) = 12.62$, $p < 0.05$), and patient race ($\chi(7) = 14.27$, $p < 0.05$). The multiple logistic regression model was a significant predictor of patients rated their nurse as a good listener ($\chi(7) = 34.14$, $p < 0.001$). If a patient’s length of stay was 8 to 14 days, the odds of rating the nurse as a good listener decreased by a factor of 0.66 ($B = -0.42$, $W = 7.74$, $p = 0.005$). If a patient’s length of stay was 15 days or longer, the odds of rating the nurse as a good listener decreased by a factor of 0.64 ($B = -0.45$, $W = 3.93$, $p = 0.047$).

Implications: Nursing care provided during a pandemic influenced patients perceptions of staff respecting their preferences. Qualitative analysis to further explore the associations of the variables is warranted.

Companionship Is Associated with Decreased Pain Severity in Veterans with Chronic Pain

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Purposes/Aims: To assess if companionship is associated with reported pain, depression, fatigue, sleep, pain self-efficacy, and opioid medication reduction among Veterans with chronic pain prescribed long-term opioid therapy (LTOT).

Rationale/Conceptual Basis/Background: Chronic pain is a major public health problem affecting an estimated 20-40 million Americans each year, and military Veterans experience increased rates of chronic pain. For individuals prescribed LTOT for chronic pain, clinical guidelines recommend opioid dose reduction when the functional benefits no longer outweigh risks. Potential advantages to opioid tapering include improved quality of life, mood, and overall functioning. For Veterans with chronic pain, access to social support may facilitate the opioid tapering process as increased social isolation has been linked to depression, anxiety, and other mental health symptoms. We sought to understand the role of perceived social supports on pain, various mental health issues, and experience with opioid medication reduction.

Methods: We conducted a prospective observational cohort study of primary care patients prescribed LTOT in the Veterans Health Administration. At 18-month follow-up, we completed a telephone survey with a random sample of cohort members. The primary exposure variable was self-reported companionship at 18-month follow-up, measured using the 4-item PROMIS Adult Companionship Instrument. We dichotomized this measure into high and low perceived companionship. The primary outcome was pain severity, measured using the 3-item PEG scale, which assesses past-week average pain intensity and interference with enjoyment of life and activity on a 0-10 scale. We also measured 1-item general health status, the 4-item Patient Health Questionnaire for depression/anxiety, the 4-item PROMIS measures of sleep and fatigue, the Pain Self-Efficacy Questionnaire and self-reported past-year opioid medication reduction. To determine the association between variables, data were analyzed using chi-square tests for all categorical variables, and independent sample t-tests for continuous variables.

Results: The study sample included 290 Veterans who completed all primary measures at 18-month follow-up. Veterans with high perceived companionship reported lower PEG scores at baseline (6.5 for high companionship vs. 7.3 for low companionship, $p<.001$), 12-month follow-up (6.5 vs. 7.4, $p<.001$) and 18-month follow-up (6.3 vs 7.1, $p<.001$). High self-reported companionship was associated with significantly less depression/anxiety, less fatigue, and better self-efficacy ($p<0.001$). These Veterans also reported improved general health at all time points ($p<0.081$, 0.001 and 0.006 at 6, 12 and 18 months respectively). High companionship was not associated with sleep quality or self-reported past-year opioid medication reduction.

Implications for Translation to Practice/Further Research/Policy: In this sample of Veterans with chronic pain prescribed LTOT, high companionship was associated with improved pain severity, depression/anxiety, fatigue, and self-efficacy. Companionship may lead to improved symptoms through support for self-management of chronic pain and navigation of healthcare services for pain management. Alternatively, decreased pain severity may lead to improved companionship through increased function, activity, and engagement with others. However, companionship was not associated with opioid tapering. Provider and health system factors may also impact Veterans' experience with opioid medication and other pain management. Future work should evaluate the impact of interventions that increase companionship, reduce mental health symptoms, and promote medication safety.

Hospital Discharge during COVID-19: The Role of Social Resources

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Purpose: To explore the effect of the COVID-19 pandemic on patients' abilities to obtain and receive social and physical support from both formal and informal networks after hospital discharge.

Background: The COVID-19 social distancing recommendations potentially disrupted the level of support provided to patients from formal networks, such as home health, and informal networks, such as friends and community members. We chose the Individual and Family Self-management Theory to guide our study as it evaluates context (risk and protective factors), process (knowledge and beliefs, self-regulation, and social facilitation), and outcomes (proximal and distal) to determine successful engagement in self-management behaviors – including transitioning home from the hospital. To date, there is scant research related to the impact of COVID-19 on hospital discharge quality and outcomes for COVID-19 and non-COVID-19 patients.

Methods: Qualitative description supported this study's focus on describing patients' experiences of transitioning home during the COVID-19 pandemic as it seeks to support close understanding of patient experiences by focusing on the words individuals use. Audio-recorded, semi-structured interviews were completed with 26 patients approximately one month after discharge from a large academic hospital. Content analysis was used to identify themes.

Results: Three themes were identified: COVID-19's impact on receiving help from friends and family, COVID-19's impact on access to healthcare services after discharge, and the contrasting post-discharge experiences of two patients hospitalized with COVID-19. While participants identified the effect post-discharge isolation had on their emotional and social experiences, they also indicated that access to instrumental support from formal and informal networks were minimally disrupted. These experiences fell in contrast to one participant, representing an extreme case, who experienced dramatic, unanticipated changes in her support network after hospital discharge due to COVID-19. A changed support network greatly impaired the participant's ability to engage in self-management behaviors, particularly given the discharge team assumed adequate support at the time of discharge.

Implications: Our findings indicate that strong pre-existing support networks are resilient and protective. However, even when patients appear to have a strong supportive network, patients should be provided with resources on what to do and who to contact if unexpected events occur post-discharge. While it may be tempting to forgo a thorough assessment of patients' social circumstances during a pandemic when health systems and resources are stressed, these are times when it may be even more important to include careful social resource assessments in clinical workflow and discharge planning, particularly in the landscape of communicable diseases likely impacting patients' abilities to obtain and receive physical and social support after hospital discharge. We recommend further research regarding how having a communicable disease, such as COVID-19, affect patients' abilities to obtain and receive support after hospital discharge.

Funding: This project was funded by the Agency for Healthcare Research and Quality, Grant no. R01HS026248

Facilitators and Barriers to Implementation of a Social Needs Assessment Screener

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Purpose/Aims: The aims of this project were to explore 1) case manager (CM) knowledge, attitudes, and perceived barriers to using a social needs assessment (SNA) during the inpatient admission process, 2) implementation strategies and barriers to using the SNA questionnaire for discharge planning, 3) CM workflow processes to respond to patient resource needs and improve patient outcomes.

Background: Social determinants of health (SDoH) are defined as environmental and social conditions – access to safe housing, healthy food, transportation, education, preventive health care, social support, and personal safety - affecting all aspects of a person's life throughout the life spectrum. Specific to health care systems, SDoH impacts individual and population health, medication adherence, hospital readmissions, treatment adherence, and cost of care. In fact, data suggest that social determinants largely explain why 50% of health care costs are applied to only 5% of the population (Fink-Samnick, 2018). A critical first step in addressing SDoH may be screening for patients' social needs in clinical settings. Screening for SDoH risks has been argued to improve SDoH visibility among healthcare clinicians, increase service referrals, and improve patient health outcomes at the individual and population levels (Byhoff et al ,2019). However, to implement appropriate interventions and provide useful resources, clinicians require focused training on patients' SDoH needs (O'Brian, 2019; Wallace et al, 2020).

Methods: We used a deductive, qualitative thematic analysis approach with semi-structured interviews and chart reviews during pre- and post-implementation of a universal SNA questionnaire. Participants were three registered nurse CMs and one case management educator. The Plan, Do, Study, and Act (PDSA) cycle framework was used to guide iterative data collection and feedback during this project.

Results: Pre-implementation interviews revealed that the CMs had limited knowledge of SDoH and the purpose of the SNA, specifically around the need to build rapport, how the SNA questionnaire could contribute to discharge planning, and help with information gathering. Time, social needs resources, workflow, and CM/patient assessment discomfort were identified as barriers to overcome. Chart audits conducted during implementation revealed that CMs did not identify any SDoH needs in any of the SNAs. Post-implementation, despite focusing on only time and workflow barriers, CMs revealed biased assumptions about patients' social needs: CMs communicated skipping the SNA according to patient appearance, insurance funding, and the home neighborhood location.

Conclusion: SDoH directly impact case management discharge planning and patient outcomes. Despite evidence that an SNA can provide early identification of SDoH needs, we identified barriers to implementation including lack of knowledge about SDoH; limited comfort with, and training in, SNA as a health screening activity; and limited time. A case management workflow process may address these barriers and provide patient-centered resources. However, our findings strongly suggest that, for SNA to translate into improved outcomes for hospitalized patients, CMs need more education and training on bias, SDoH's impact on patient outcomes, SNA strategies and tools, and resources to provide appropriate and patient-centered discharge planning.

Dignity for Persons Living with Serious Illness: Timing of Illness Onset Matters

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Purpose: Describe the characteristics of dignity for persons living with serious illness.

Background: Preserving patients' dignity is integral to the nurse role in the U.S. and globally. More research is needed to explore how a diversity of patients experience, gain, or lose dignity. There has been significant inquiry into dignity at the end of life, but there is a dearth of such research for persons living with serious illness and particularly those who experienced their illness from a young age (early onset).

Methods: Using a secondary data set of transcripts of audio-recorded interviews, a thematic content analysis was conducted to identify characteristics of dignity**.** The primary data were collected from October 2019 to October 2020 under the parent study from 16 persons living with serious illness who were admitted in an acute care hospital. The patient participants were aged $\geq$18 years and diagnosed with heart failure and/or dialysis-dependent renal failure. The research team employed van Gennip et al.'s, 2013 "Model of Dignity in Illness" to create a codebook, which the three authors utilized to independently code all 16 transcripts. Codes were categorized from each of the model's three domains: individual self, relational self, and societal self. Each coder independently entered their codes into a matrix. The matrix was used to lead discussions at weekly research team meetings from May 2021 to September 2021 for final thematic consensus on findings presented here.

Results: Ten of the 16 (62.5%) participants were diagnosed with heart failure and six (37.5%) were diagnosed with end stage renal disease. Nine (56.3%) participants identified as non-white. Five of the 16 participants qualified as adolescent or young adult (15 – 35 years of age) at time of illness onset (early onset group). The average age of the early-onset and late-onset participants at the time of the study was 32 and 55 years, respectively. Participants' current age ranged from 20 years to 70 years with an average age of 47.9 years. A main finding was early onset participants expressed markedly different dignity concerns than late onset participants. In the individual domain, early onset participants felt that their illness was "normal"; they did not experience the "healthy person to patient" transition described by older onset participants. In the relational domain, early onset participants expressed that their relationships were formed through illness and were therefore more likely to withstand worsening illness. In the societal domain, both early and late onset groups expressed similar, but not identical, dignity concerns related to their ability to work and support themselves and their families financially.

Implications: A person's sense of dignity through serious illness may depend on the timing of illness onset. The findings from this study indicate that persons with early-onset illness have an experience of dignity that is distinctive from other groups. Furthermore, nurses' awareness of the importance of work and financial independence to the experience of dignity for serious ill patients may enhance patients' dignity experience.

Funding: NIH/NINR K99/R00NR016686-04 PI: HCoats

An Interpretive Description of Older Adults' Experience Creating a Legacy of Values

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Background: A legacy of values (e.g., ethical will, legacy letter) is a non-legal way to express values, beliefs, life lessons, wisdom, love, apology or forgiveness using any format (e.g., text, audio, video). Creating a legacy of values intentionally communicates intangible assets, including emotional and supportive instruction, with family, friends, or community. While a few studies have investigated legacy interventions for patients with a terminal illness, no studies have explored the experiences of older adults in the community creating a legacy of values.

Purpose: As part of a larger exploratory sequential mixed methods study examining the outcomes of older adults creating a legacy of values, we conducted interviews with older adults exploring their motivations for, contextual factors surrounding, and outcomes related to creating a legacy of values.

Methods: From January to May 2021, we enrolled 16 older adults who had previously created a legacy of values to participate in semi-structured interviews about their experience. We analyzed transcribed interviews using an interpretive descriptive approach. We iteratively coded the interviews deductively, based on the research questions and sensitizing concepts identified in the literature (e.g., existential well-being, end-of-life preparation and completion, generativity, and resilience) and inductively, based on participants' descriptions of their experiences. Codes were analyzed by patterns of motivations, creation, outcomes, and meaning and thematically summarized.

Results: We conceptualized the overall experience of creating a legacy of values as *Preparing for the Future While Living in the Present*. We identified four themes characterizing the experience of creating a legacy of values: *Preserving the Intangible for You and for Me*, *Sharing What I Want You to Know*, *Obtaining Peace through Connection and Preparation*, and *Living into a Continuing Legacy*. Creating a legacy of values is a non-linear, iterative process that is influenced by the individual's personal, familial, and societal contextual factors. Participants described the legacy of values as a way to distill who they are and how they want to be remembered, communicate their most important values to others, and provide a link between the generations. Through the process of creating a legacy of values, participants received peace, affirmation, and a sense of symbolic immortality.

Implications for Practice: Creating a legacy of values is a way for individuals to make a lasting impression on others, obtain a sense of peace, and foster continued life engagement. Creating a legacy of values is a promising approach for nurses to help older adults across care settings address their mortality and obtain a sense of peace amidst their circumstances. These findings are also applicable to gerontologists and interdisciplinary professionals working with older adults within clinical and community settings (e.g., social workers, chaplains, older adult ministers, physicians) who are well positioned to interact with older adults during times of life transition and engage them in what matters most as they age and anticipate the end of life.

Funding: Sarah Neller was supported by the National Institute of Nursing Research of the National Institutes of Health under Award Number T32NR013456 and a research award from the Sigma Theta Tau Gamma Rho Chapter.

Impact of Dementia-Related Behaviors on the Health Status of Diverse Family Caregivers

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Background: Community-dwelling persons with dementia (PWD) rely on family caregivers for most of their basic needs, which include management of complex behavioral needs. Without adequate support, many family caregivers experience severe burden. Family caregivers of PWD are twice as likely to experience significant emotional, financial and physical difficulties when compared with family caregivers of persons without dementia. This role can span many years, and the continuous care of their loved one takes a significant toll, resulting in the experience of chronic stress, depression, sleep disorders, poor health quality of life, and early mortality. While caregiver burden is well documented in the literature, we do not fully understand the impact on those within diverse communities who may also experience the added challenges of low socioeconomic status, limited English proficiency, and lack of familiarity of available resources.

Purpose of Study: To understand characteristics of diverse family caregivers for PWD and examine the relationship of caregiver health status, including caregiver burden, depression, stress, sleep, and caregiving self-efficacy to the PWD's memory and behavioral problems.

Methods: This is a cross-sectional study of survey data collected from a convenience sample of family caregivers of community-dwelling PWD recruited in a diverse county in Southern California. Survey questions included demographics, service utilization related to Alzheimer's care, the SF-12 Health Survey for health-related quality of life, the Zarit Burden Interview, Center for Epidemiologic Studies Depression Scale, Caregiving Self-Efficacy, and perceived Stress Scale. PWD characteristics were also reported by caregivers, including demographics, Katz index of independence in activities of daily living (ADL), Lawton-Brody instrumental activities of daily living scale, and The Revised Memory and Behavior Problems Checklist. Analysis was performed using R statistical software (significance level of $P < .05$).

Results: A total of 26 family caregivers participated in the study (13 Korean, 8 Vietnamese, 3 Latinx, 2 Non-Hispanic White; relationship to the PWD: 13 spouses (50%), 13 off-spring (50%); 18 females (69%); mean age=66.8, SD=12.7). 30% of caregivers reported little to no English proficiency. 58% of PWD and 33% of family caregivers had Medicaid, and 2 family caregivers had no health insurance. 50% of caregivers reported having a chronic illness: hypertension, diabetes, and high cholesterol. Half of caregivers reported seeking help from community resources, including in-home supportive services, adult day services, caregiving education, or support group. 61.5% of caregivers reported "No one" helped them care for the PWD.

Significant correlations were found between the PWD's memory and behavioral problems and caregiver outcomes, including depression, stress, and caregiving self-efficacy (all $P<.05$). There was a significant trend between caregiver burden and PWD behavioral problems ($P=.052$). Caregivers' depression and quality of life were significantly related to the PWD's ADL (all $P<.05$).

Conclusions: Results from the study demonstrate that diverse family caregivers' health outcomes were significantly associated with the behavioral problems of their loved one with dementia. Caregiver outcomes may be related to low utilization of dementia-related community services. Low English proficiency may influence patterns of service utilization. Availability of culturally and linguistically appropriate services could improve well-being among diverse dementia family caregivers.

Funding: NIH/NIA R01 AG069074

Elderly Partners Experience of Bladder/Colorectal Cancer Diagnosis, Surgery, Ostomy

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Purposes: The purpose of this study was to illuminate the experiences of elderly, 65 to 84 years old, partners of patients diagnosed with bladder and/or CRC resulting in an ostomy.
Conceptual Basis/Background: Bladder and colorectal cancer (CRC) are two of the most aggressive types of cancer with treatment creating physical and psychosocial comorbidities that affect the quality of life of patients affected by the disease. Numerous studies have been conducted about the experiences and needs of people who have had a bladder and/or CRC diagnosis, surgical intervention, and an ostomy, but studies about the experiences of the elderly partners are negligible. Specifically, the older adult (65-84 years old) group was found to be essentially unstudied with only 10 (0.51%) known 75- to 84-year-old participants included in relevant studies that involved 2119 participants. Thus, this elderly group may have distinct experiences, needs, and challenges that are unknown and warrant our attention. Therefore, a research study was proposed to study the experiences of this specific group of elderly partners of patients diagnosed with CRC who have an ostomy.
Methods: Giorgi's descriptive phenomenological method and narrative descriptions provided by the participants (n=11) were used to address the knowledge gap. Participants were the partners (husband/wife/cohabitating intimate significant other) of a person who had a bladder or CRC diagnosis and surgery resulting in an ostomy who were 65-84 years of age, English reading and speaking, cognitively intact (Mini-Cog™ with Clock Drawing Test score of 3-5), literate at better than the 6th grade reading level (Rapid Estimate of Adult Literacy in Medicine—Short Form, score >4), and agreeable to participate in a one-on-one audiotaped interview. The interview length average was 39.3 (standard deviation, 12.53) minutes and ranged from 10 to 55 minutes. The interviews were taped, transcribed, and then analyzed to identify themes.
Results: Participants (n=11) were recruited from support groups and the United Ostomy Association of America within Los Angeles, Orange, Riverside, and San Bernardino counties. All were partners (cohabitating husband, wife, or intimate significant other) of a person who had a bladder and/or CRC diagnosis with an ostomy. There were three males and eight females age from 65 - 84 years. They met the inclusion criteria, completed the interview, and constituted the sample. They were all Caucasian with educational background from high school to terminal degrees. Using Giorgi's five-step analysis method, five themes emerged that illuminated the partners' experience: (a) feeling supported by others, (b) providing support to the person with cancer and an ostomy, (c) expressed needs, (d) accepting/adjusting to diagnosis/treatment/ostomy, and (e) advocating for the person with cancer and an ostomy.
Implications: The findings have suggested that the young- to middle-old adult partners' experiences mirror those of younger partners of patients with bladder and/or CRC and an ostomy, but their experiences differed in their expressed needs and the lack of importance of sexuality. The findings may serve as the foundation for future studies to improve the care of the elderly partners of patients with a bladder and/or CRC diagnosis, surgery, and an ostomy.

Time to First Rehospitalization in Medicare Recipients with Heart Failure

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Purpose: To identify patient-related characteristics associated with time-to-first rehospitalization in Medicare recipients with HF within the first 60 days of the home healthcare (HHC) episode.

Background: Heart failure (HF) is the leading cause of rehospitalization due to frequent HF exacerbations. Unfortunately, although HF exacerbations are preventable, patients with HF often tolerate worsening of symptoms for a few days and may delay seeking timely medical care. HHC services provide continuous care after hospital discharge but despite that attention, many patients with HF are experiencing rehospitalization during the HHC episode. It is important to highlight patient characteristics associated with rehospitalization to develop preventive interventions.

Methods: This observational, cross-sectional study analyzed a de-identified Outcome Assessment Information Set (OASIS)-C dataset provided by a for-profit HHC company. We used items derived from the OASIS-C start of care dataset as potential patient characteristics associated with time-to-first all-cause rehospitalization for Medicare recipients with HF. Time-to-first rehospitalization is defined as the number of days from the index hospitalization discharge to the first rehospitalization, within the first 60 days of the HHC episode. To examine associations between all of the variables and time-to-first-rehospitalization, the Cox Proportional Hazards Regression procedure was conducted in SAS™ version 9.4, which accounts for both censored and non-censored data. Hazard ratios for time-to-first-rehospitalization were calculated for each statistically significant risk factor, using the Kaplan-Meier method.

Results: A total of 567 subjects were included in the dataset for survival analysis. Overall, the median age of subjects in the survival analysis sample was 79.1 years (IQR 15.1), and 10.7% of subjects were between 55 and 65 years. Females were approximately 55%, and the majority of subjects were White (83%). In terms of living arrangements, 74% of subjects were reported to be living with other person(s) in the home, with or without any kind of assistance ($p<0.01$). The rate of first rehospitalization within the first 60 days of the home health care episode was 36%. A total of final seven patient-related characteristics from the Cox proportional hazards model were associated with time-to-first rehospitalization during the course of the 60-day home health care episode: a change of urinary incontinence prior to medical or treatment regimen change or in-patient stay within the past 14 days, multiple hospitalizations (i.e. more than two) in the past 12 months, results of formal pain assessment (with or without reports of severe pain), living situations, physician-ordered plan of care which include pressure ulcer treatment, frequency of pain interfering with the subject's activity or movement and the subject's ability to dress his or her lower body. The Kaplan-Meier curve graphically presents differences among the strata for each categorical predictor at 30days and at 60 days by using Epanechnikov Kernel-Smoothed Hazard, which provides the expected number of events at certain time points, for every 1000 person-days at risk.

Implications for Further Research: Because of the 30-day rehospitalization penalty from the Centers for Medicare and Medicaid Services, identifying risk factors that are associated with time-to-30-day rehospitalization in the HHC setting by using updated OASIS may be warranted.

Positively Influencing Nursing Student Attitudes Toward Older Adults to Create Change

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Background: The older adult population in the US is burgeoning. With aging comes chronic conditions and complex health care needs. Nurses will be at the forefront of providing the skilled, compassionate care needed for this population. It has been shown that undergraduate nursing students do not commonly desire to work with older adults after graduation which could be secondary to negative attitudes; this can also adversely impact the care provided. Research has shown that increasing interactions with older adults can promote positive attitudes among undergraduate nurses and potentially increase their desire to enter this field after graduation.

Objectives: To see if the use of novel, various teaching approaches positively shifts undergraduate nursing student attitudes toward older adults and can promote more desire to work with this population.

Design: A pre/post interventional study design was used, and comparisons of the total score were analyzed using t-tests.

Methods: Students in two cohorts (2019 and 2020) enrolled in the course, Nursing Care of the Older Adult, completed the Kogan's Attitude Toward Older People Instrument on the first and last day of class at a large University in the Midwest. Participation was voluntary and student identification remained anonymous. A total of total of 233 students were included in the baseline data. Post course data was analyzed on 216 students. Faculty employed several intentional teaching methods during the 8 week course to impart content to students, and increase positive interactions with older adults including lecture presentations by faculty, videos, MaskEd™ presentations, small group exercises, case studies and clinical hours.

Results: Both cohorts had significant ($p <.0001$) differences in the total score of 8-9 points from baseline to post survey on the Kogan instrument, indicating a positive change in attitudes toward older adults. The total scores changed from 167.2 (95% CI: 164.1, 170.4) pre to 176.9 (95% CI: 173.3, 180.6) post in 2019 and 179.4 (95% CI: 174.4, 184.5) pre to 188.1 (182.9, 193.4) post in 2020.

Conclusion: Incorporating innovative, intentional teaching strategies into a gerontology course was effective in promoting positive attitudes toward older adults.

Engaging Undergraduate Nursing Students in Research

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Problem: Research opportunities and interest are often lacking among undergraduate nursing students, yet these very students are the nurse scientists of the future.
Methods and Setting: An innovative project targeting nursing students in an undergraduate baccalaureate nursing program was created to: a) generate excitement regarding the importance of nursing scholarship, b) promote active involvement in research activities, c) support faculty research, and d) raise awareness of the role of the PhD prepared nurse scientists. Response to announcements and student attendance at orientation sessions were used to gauge initial interest. The number of students who engaged and program outcomes were also tracked.
Description: We created the Student Undergraduate Research Generating Evidence (SURGE) program to provide undergraduate students with applied research opportunities. At SURGE orientations, first term undergraduate (UG) students received basic information about the research process and reassurance that no prior experience is necessary. Faculty research foci are presented and student research interests are solicited, followed by a discussion regarding research support available, and current opportunities for participation. Possible research activities available for student engagement include data collection and entry, qualitative coding and analysis, quantitative analysis, and full proposal development and implementation. Student participation also extends to inclusion in research dissemination. The SURGE program provides faculty opportunities to mentor UG students in active research participation and exposure to the nurse scientist role. To date, we have had two orientations ($n = 41$ UG attendees), with a third orientation scheduled for Fall 2021. Feedback after orientations included students' new appreciation for the breadth of research possible, increased awareness of nursing research, and better understanding of the nurse scientist role. Eleven students engaged in research activities across four different studies, and one is in the pipeline for the PhD program. One abstract submitted by students was accepted for a podium presentation at a professional conference, and a manuscript on the same project is being prepared for submission with students holding first and second authorship.
Implications: Innovative programs to engage students in research and scholarship are essential. While gaining valuable research experience, UG students are also exposed to the PhD program. American Association of Colleges of Nursing data indicates reduced numbers of students enrolling in PhD programs. The education of PhD prepared nurse scientists is crucial to the future of nursing. Nurse scientists generate new knowledge and conduct translational research resulting in evidence for implementation science, which supports evidence-based-practice and quality improvement. Nursing care of increasingly high-acuity patients in complex health systems, requires the generation of new evidence and innovative solutions.
Recommendations: Providing early opportunities for engagement in research increases UG students' pursuit of graduate studies and nursing research. Innovative efforts to enhance the research environment and scholarly productivity of nursing schools simultaneously supports the future of our profession by including UG students in research. Longitudinal tracking of student outcomes, professional attainment, and scholarship will be essential to evaluate our sphere of influence. Simultaneously, faculty scholarly productivity may show a pattern of increase reflecting mentoring activities, which may also increase faculty satisfaction.

Inclusive Excellence in Undergraduate Clinical Education with Teaching Innovation

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Purpose: This process improvement project aimed to explore innovative teaching strategies fostering inclusive excellence in nursing undergraduate clinical education.
Rationale/Background: With the restrictions caused by the pandemic, many hospitals have limited in-person clinicals, and many programs canceled in-person skills training. Students have no choice but to adapt to the new norm rapidly. Underrepresented and marginalized individuals often suffer from high burden caused by sudden changes and may struggle to adjust their learning strategies to cope with the changes made by their programs even while coping with pandemic-associated mental stress. The need is urgent and imperative to ensure inclusive excellence in teaching and equitable access to education.
Description of the Undertaking: Through this process improvement project, the faculty explored innovative teaching strategies to improve academic inclusivity in accessibility, neurodiversity, inclusive online learning, digital team-based learning, and mental health support. For accessibility, all electronic documents went through an accessibility check before being published. Audio and video content was created with online content capturing programs for captioning. For neurodiversity, students were provided with multiple content delivery formats. For example, skills training videos could be helpful for visual learners, while other students might prefer to use the electronic skills checklist to guide their skills training. Technology proficiency, financial constraints, and user situations were also considered. Zoom conferencing and Nearpod were used to create a virtual safe space for the students to do a weekly mental wellbeing check-in. Using those tools, faculty fostered a safe space for students to share their concerns and debrief timely.
Assessment of Findings/Outcomes Achieved: A simple survey was implemented for the students during the weekly virtual check-ins. The survey results indicated an overall improvement in mental wellbeing and a decrease in anxiety. The students expressed that the teaching strategies had enabled them to stay connected with faculty and peers, and the challenges associate with the pandemic were lessened. The students also felt they could express their concerns to faculty in a safe and inclusive environment. The teaching innovations also provided an excellent opportunity to spur conversations and awareness among faculty and students regarding diversity, equity, and inclusion in higher education. The students stated they felt much more confident and prepared for the future semesters and entering the nursing task force. The success of the teaching strategies was also reflected in the student retention rate of 100%. Student engagement in extracurricular activities increased with the majority of the students in the cohort volunteering to mentor incoming students.
Conclusions: The goal of promoting an inclusive learning environment before the pandemic still applies to online or hybrid settings, though barriers make it more complicated to do so with virtual pedagogies. Combining modern technologies' benefits with their teaching talent, nursing faculty can leverage innovative teaching strategies to enhance inclusive excellence.

Primary Care Experiences for Baccalaureate Nursing Students in Rural Communities

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Purpose/Aims: The objectives of this project are: 1) identify primary care (PC) clinics serving rural and underserved communities having at least one nurse working within an interdisciplinary team, 2) develop partnerships with these clinics to place baccalaureate nursing students for clinical rotations including capstone, and 3) maintain partnerships to ensure nurses provide students with positive clinical experiences. The premise behind these objectives is to prepare nursing graduates to work in PC.

Rational/Background: Primary care is an essential component of the healthcare system. Current PC delivery models are often unable to meet the needs of their patients, especially clinics serving rural or underserved populations or those operating without a nurse. PC transformation is needed, including care models that feature interprofessional teams. To capitalize on the nursing role, the skill sets, educational competencies, and number of RNs working in PC must be increased. For this to occur, there is a need for student nurses to have meaningful PC rotations and for those that mentor them to be practicing at the top of their licensure.

Undertaking: We partnered with the Utah Association of Community Health Centers (AUCH) to identify clinics. Unfortunately, there was a limited number that employed nurses and even less having nurses practicing at the top of their licensure. As such, we expanded our search to include urban clinics serving underserved populations. Simultaneously, we identified encounter types that lent themselves to a shared nursing/provider encounter or where an independent nurse could work under the "incident to" rules associated with billing. We developed implementation guides for these encounters. We subsequently met with the clinics and made business cases demonstrating that a nurse working at the top of their licensure could increase revenue, reduce provider burnout, and improve patient outcomes.

Findings/Outcomes: We developed partnerships with 12 clinics and provided trainings utilizing a combination of onsite and remote learning featuring the implementation guides developed for this project (i.e., Annual Wellness Visit, Chronic Care Management, Transitional Care Management, Advanced Care Planning). A dedicated College of Nursing liaison provided the trainings. Findings from the clinics identified additional nursing roles and we subsequently developed materials supporting dementia assessments and women's health. Webinars (n=26) help ensure nurses continue to operate at the top of their licensure. We placed 26 students with most (n=24) utilizing this as their capstone experience. A total of 1,696 clinical hours were completed by the students.

Conclusion and Next Steps: Progress has been made in placing baccalaureate students in PC clinics as well as increasing the nursing role within the clinics we partnered with, yet much remains to be done. For example, some have implemented shared nursing/provider encounters but do so without standard protocols or standing order sets. A recent AAACN open forum discussion identified many clinics across the nation that are trying to address this issue as well. Work remains to improve the nursing role within PC clinics. The ongoing placement of students within fully functioning clinics is important if we are to increase the role and numbers of nurses working in PC.

Funding: Health Resources and Services Administration (HRSA): UK1HP31735 Nurse Education, Practice, Quality and Retention Program

Using Virtual Reality for Urinary Catheter Insertion Mastery Learning

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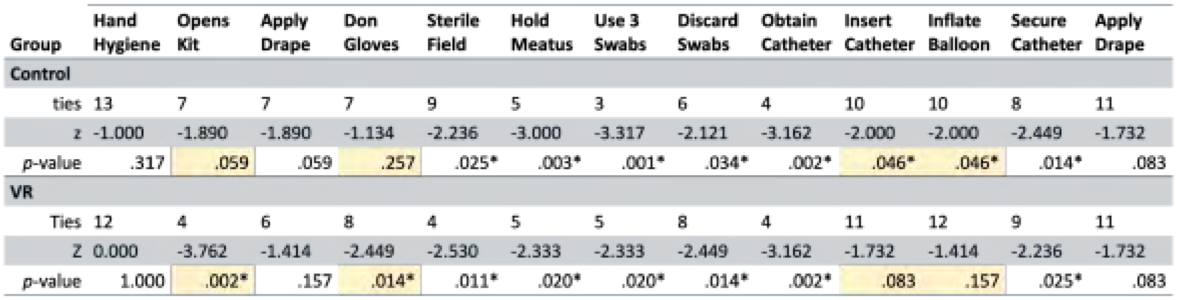
Purpose: The purpose of this pilot study was to examine the effectiveness of an innovative virtual reality (VR) program used to practice female urinary catheter insertion, including student learning of sterile technique and feasibility of replacing traditional education (on task trainers) with VR training.

Rationale: Mastering procedural skills has become increasingly challenging for nursing students without significant costs of simulation time, supplies, and faculty. Decreasing exposure to skills in the clinical setting, increasing hospital regulations dictating student experiences, and increasing cost of nursing faculty time has made it difficult for students to repeatedly practice, much less master, procedural skills for quality outcomes. Hospital-acquired infections such as catheter-associated urinary tract infections (CAUTIs) are considered a preventable quality outcome that can be used to measure effectiveness of sterile technique.

Methods: A pre- post quantitative design was used to compare participants practicing urinary catheter insertion traditionally with those practicing in virtual reality. IRB was obtained. A convenience sample of n=36 of pre-licensure nursing students was consented using faculty not associated with student's course or grading criteria. All participants received a pretest prior to traditional vs. VR education to standardize initial exposure to urinary catheter insertion. Students were then randomized to control group (n=18) vs. virtual reality experimental group (n=18) for 3 weeks of practice. A post-test using standard checklist prior to course evaluation was then administered to both the tradition and VR groups to decrease anxiety associated with final course evaluations. The pre- and post-test included hand hygiene, opening a sterile kit, applying sterile drape, donning sterile gloves, keeping field sterile, holding meatus, swabbing technique, discarding swabs, obtaining catheter, inserting catheter, inflating balloon, securing catheter, and remove drape.

Results: Pilot data was analyzed using Wilcoxon Signed-Ranks test for paired ordinal variables and *p*-value comparisons. An alpha = 0.05 was used for an initial study. Total sample size after dropping missed data was n=28 (n=14 control, n=14 VR). No difference was found in outcomes for the traditional practice vs. the VR groups overall. For each data point, a significant difference was found (p=.002, p=.0014) in "opens kit" & "donning gloves" in the VR group. A significant difference was found (p=.046 and p=.046) in "inserting catheter" and "inflating balloon" in the control group. Conclusion: It is feasible to use VR as an alternative training method for urinary catheter insertion and sterile technique decreasing sterile supplies costs and the high cost of faculty time during repeated practice.

Implications: VR enhancements in the urine catheter insertion program for inserting catheter and inflating balloon are needed for further studies. Although an agreed-upon, criterion-based checklist is used to teach and test competence, there remains an element of ambiguity in how procedures are taught and tested. Research on critical elements of a checklist is needed to decrease the amount of VR programming. The VR system will then give immediate and standardized feedback to the learner during practice. Decreased cost for procedural education in all health sciences after initial VR expenditure could allow time for additional needed education.



Group	Hand Hygiene	Opens Kit	Apply Drape	Don Gloves	Sterile Field	Hold Meatus	Use 3 Swabs	Discard Swabs	Obtain Catheter	Insert Catheter	Inflate Balloon	Secure Catheter	Apply Drape
Control													
ties	13	7	7	7	9	5	3	6	4	10	10	8	11
z	-1.000	-1.890	-1.890	-1.134	-2.236	-3.000	-3.317	-2.121	-3.162	-2.000	-2.000	-2.449	-1.732
p-value	.317	.059	.059	.257	.025*	.003*	.001*	.034*	.002*	.046*	.046*	.014*	.083
VR													
Ties	12	4	6	8	4	5	5	8	4	11	12	9	11
Z	0.000	-3.762	-1.414	-2.449	-2.530	-2.333	-2.333	-2.449	-3.162	-1.732	-1.414	-2.236	-1.732
p-value	1.000	.002*	.157	.014*	.011*	.020*	.020*	.014*	.002*	.083	.157	.025*	.083

Excelling at DNP Curricular Mapping

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Purpose: This project aimed to align the current DNP curriculum at the UCSF School of Nursing with the recently released competencies from AACN that address two levels of nursing education: entry-level and advanced-level. It was vital to reveal gaps and excesses in the current DNP curriculum to continue to support program growth. Advanced-level competencies will impact both DNP program and the advanced practice specialties currently housed within the Master's program.

Background: In 2006 AACN published *The Essentials of Doctoral Education for Advanced Nursing Practice* as competencies to guide development of DNP programs. These eight competencies were used to support our post-Masters DNP program that opened in 2018. In 2021 AACN released an updated set of competencies, *The New Essentials: Core Competencies for Professional Nursing Education* that introduced some new domains that will need to be addressed by nursing education.

According to AACN, there are over 350 DNP programs, and over half of those under development will be at the post-Baccalaureate level. Professional organizations have endorsed the DNP including the National Organization of Nurse Practitioner Faculties (NONPF) that committed to transition nurse practitioner education to the DNP by 2025. This has hastened planning efforts nationally, including at UCSF, where planning for transitioning current Master's specialties to the DNP is underway. It was prudent to evaluate our current DNP curriculum to reveal gaps and redundancies that will need to be addressed to align with AACN competencies as well as the planned integration of specialty programs into a DNP exit. A literature review revealed examples of curricular mapping that were used to conceptualize an approach to this project.

Methods: A curricular mapping project cross referenced DNP course objectives and assignments for current DNP courses with the AACN New Essentials competencies An excel spreadsheet was created to tabulate frequencies of course objectives and assignments, and two evaluators scored each course.

Findings: The project revealed multiple strengths in the curriculum, as well as areas for improvement. Sixty-eight percent of all 204 sub-competencies were represented by at least one course objectives or assignment. Two domains, knowledge for practice (domain 1) and scholarship (domain 4) were fully represented in objectives and/or assignments. However, some other domains need further exploration. For example, domain 2, (person-centered care) only met competency mapping for 41% of items. This finding may be due to the nature of our post-Master's DNP program that doesn't confer advanced practice role preparation at this time.

Conclusions and Recommendations: As expected with our current post-Master's DNP program, some competency domains were underrepresented and will need to be addressed. This project provided insight into the state of our curriculum and changes needed. We anticipate that with integration of the Master's specialty content these domains will be more evident in objectives and/or assignments. Future work will need to align project findings with results of curricular mapping of the Master's programs to generate a seamless post-Baccalaureate model to DNP exit.

A Model for Regional Delivery of Advanced Practice Nursing Programs

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Purposes/Aims: The purpose of this performance improvement project was to develop a model for regional delivery of advanced practice nursing (APN) programs that 1) is sustainable, 2) supports students remaining in rural communities, 3) addresses the needs of both rural and urban students, 4) is based on best practices for teaching and learning, 5) is flexible to align with differing APN program needs, and 6) meets statewide workforce needs.

Rationale/Background: In Oregon there is a lack of primary care providers in rural areas. In a 2018 Oregon Center for Nursing survey, 87% of responding hospital and health systems reported that recruiting and hiring APNs was challenging; yet 74% still plan to increase the number of APNs in the next two years. OHSU School of Nursing, the only statewide public school of nursing, responded to this need through the development of a regional delivery model to educate APN students in their communities.

Brief Description of the Undertaking/Best Practice: In collaboration with a Performance Improvement consultant with expertise in Lean Quality Improvement methods, we established a performance improvement process, formed a work group that included practice faculty, regional academic leaders and staff and created a charter that included scope of work, timelines, and outcomes. We completed a root cause analysis followed by a two-day Kaizen, which is an intensive brainstorming event with key stakeholders to identify future state with short and long-term goals. The initial model emerged from this event and was refined over the following year as we implemented the action steps from the Kaizen. The final model revolves around being equitable, learner-centered and sustainable with key strategies (e.g., communication plan, standard processes and experiences, evidence-based teaching, authentic learning, clinical partner engagement, preceptor support and development). The central outcome is graduating students committed to practicing in rural and urban underserved communities. We also assessed the impact of model implementation through surveys with preceptors, students, and faculty, focus groups with students and student enrollment and graduation in rural areas of the state.

Assessment of Findings/Outcomes Achieved: We standardized terminology and the layout of course web pages and developed a communication plan and a Doctor of Nursing Practice (DNP) program calendar for travel, events and exams. In student surveys a majority of rural students reported improvements in connectivity and clarity of information/communication. Most preceptors felt they had the needed resources and faculty were available for questions and concerns. We have subsequently expanded offering of the family nurse practitioner (FNP) and psychiatric mental health nurse practitioner (PMHNP) programs to Eastern and Southern Oregon with 8 current students and 5 graduates in Eastern and 20 current students and 1 graduate in Southern Oregon.

Conclusions: Use of best practices in performance improvement, listening and responding to key stakeholders, and forming a strong team committed to ensuring success of outcomes was critical to the success of the development of this model.

Funding: 1 T94HP32900 Health Resources and Services Administration

Community Health Fairs as Health Promotion for the Latino Community

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Purpose: The purpose of this research is to describe a community engaged project designed to provide basic health screenings and preventive services to the Latino community in a rural area.

Background: The number of individuals who identify as Latino is continually growing, and Latinos may experience disproportionate socioeconomic, occupational, and environmental risks that negatively affect their overall health. In a new immigrant community, where the Latino population makes up approximately 4% of the overall population, barriers including language and insurance coverage create unequal access to care. In previous research conducted by our team, we found that 80% of the Latino population lack health insurance and a regular medical provider. Additionally, 67% reported not visiting a dentist within the previous five years. While community health fairs are not designed to deliver primary care to populations, they can serve to promote healthy habits, identify health risks, and provide an opportunity to refer people to more consistent medical care. Therefore, at the request of our team's community advisory board, we conducted two community health screening events for the Spanish-speaking Latino population.

Methods: In June and October 2021, we conducted community health fairs to offer basic health screenings including body mass index (BMI), blood pressure, pulse, and hemoglobin A1c measurements. Screenings were delivered by nursing and medicine students with the assistance of other students serving as interpreters. Interpreters administered a health history survey to assess risk factors. A non-profit dental provider offered dental cleanings, sealants, and x-rays. Community organizations were invited to present resources at tables. All results were shared with participants. Abnormal results were referred to a public health nurse or a physician for consultation. Referrals for follow-up care were provided and were coordinated by a bilingual nursing student.

Results: We conducted a total of 98 medical screenings and provided dental services to 70 participants in the two health fairs. We found that 85% of participants lacked health insurance and that 83% lacked a usual source of care. We found diabetes in 10%, pre-diabetes in 35%; hypertension in 45%, pre-hypertension in 35%; overweight in 41% and obesity in 37% of the sample. When asked to rate their ability to speak English, 71% responded "poor". We made 12 referrals for follow up care for dentistry.

Implications for Translation to Practice: The poor health outcomes of participants at the health fair indicate a need for regular medical care for many Latinos in our community. Unfortunately, due to language and cultural barriers, the health fair may be the only source of health information and preventive care for many who attended. Nurses are in a unique position to provide health screenings to those who require medical care and can assist with case management and referrals. Using a community based participatory research approach ensures that the community's needs are incorporated into the planning and delivery of such events.

A Physical Activity Intervention with Latinx Adults with Type 2 Diabetes Mellitus

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Aims: To evaluate impact of the *Salud Paso por Paso* intervention on number of steps and minutes per week of physical activity (PA) pre- to post-intervention and to assess intervention feasibility and acceptability in a group of Latinx adults living with type 2 diabetes mellitus (T2DM).

Background: The U.S. Latinx population accounts for approximately 18% of the total U.S. population and it is growing at a rate higher than that of other groups. This population is disproportionally affected by the burden of T2DM. Latinx adults have a greater than 50% risk for developing diabetes than other U.S. adults. Additionally, Latinx individuals with T2DM have a higher incidence and prevalence of nephropathy, diabetic eye disease, and higher incidence of diabetes-related amputations. Limited information is available regarding culturally-tailored PA interventions for Latinx adults with T2DM.

Methods: A community-partnered approach was used to examine a novel culturally-tailored PA intervention using a pre-post, no control group design. Participant recruitment occurred in a free clinic. A convenience sample of Latinx adults living with T2DM were recruited. Inclusion criteria were confirmed diagnosis of T2DM, ability to speak English or Spanish, and previously sedentary. Intervention development was theoretically-informed and consisted of six weekly 45-minute sessions for participants to engage in PA. Participants provided baseline and post-intervention data on demographic and health characteristics and self-efficacy. Data analyzed included demographic data, acculturation, self-efficacy scores, and PA frequency (steps and minutes of PA per week).

Results: 21 individuals enrolled, with 19 (90.5%) participants completing the intervention. The typical participant was a 53-year-old female (90%) Latina adult living with T2DM with low acculturation. All participants spoke primarily Spanish and had lower income levels; additionally, participants had lived in the U.S. for 15 years on average. Self-efficacy scores showed participants had high self-efficacy pre- and post-intervention. Pre-intervention, participants walked 10,285 (SD=14,779) steps per week with 43.4 (SD=68.1) minutes of PA per week. Post-intervention, participants walked 19,197 (SD=27,719) steps per week and 118 (SD=115) minutes of PA per week. There were significant increases in steps per week (p=0.007; d=1.03) and minutes of PA per week (p=0.000; d=1.62). Participants also expressed positive comments regarding the weekly PA intervention demonstration.

Further Research: Findings suggest that *Salud Paso por Paso* has promise as a strategy to enhance PA behaviors in Latinx adults. Participants had increases in steps and minutes of PA per week. The need for effective interventions promoting PA in Latinx adults is considerable. As the *Salud Paso por Paso* intervention was being conducted, many participants expressed interest in learning more about other behaviors that can enhance T2DM outcomes, such as nutrition. While the focus of this intervention was engaging participants in PA, a randomized, controlled trial with a larger study sample is warranted to examine efficacy and impact on the diabetes health outcomes of Latinx adults with T2DM. Moreover, future research should include measures to examine the ability for long-term sustainment of PA improvements. Developing effective interventions that can ameliorate the deleterious effects of T2DM in Latinx adults will lead to a healthier community.

Funding: National Institute of Nursing Research-funded T32 Health Behavior Science Pre-Doctoral Fellowship

"HIV Is Not the Same as Before": An Explanatory Model of HIV Infection Among Latinos in NYC

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Rationale/Conceptual Basis/Background: Cultural perceptions of illness can alter patients' willingness to accept diagnoses, follow medical advice, and adhere to prescribed treatments. Nurses can their tailor care to address patients' cultural beliefs, which can increase patient engagement and self-management behaviors, leading to better health outcomes; yet there is little research on how to identify and explore patients' unique viewpoints. One way to generate this understanding is to create explanatory models (EM). EMs synthesize an individual (or group's) illness experience by detailing cultural nuances of diagnosis components such as its etiology, pathophysiology, and preferred treatment among others.

Purposes/Aims: To construct an explanatory model of the illness experience of Latino persons living with HIV (PLWH) in New York City (NYC).

Methods: We recruited adult (≥ 18 years of age) PLWH who self-identified as Hispanic or Latino from a clinic specializing in HIV care. Guided by qualitative descriptive methodology, participants completed in-depth interviews with a bilingual (English/Spanish) nurse researcher in their preferred language. Interviews followed a semi-structured interview guide developed using established methods. Questions followed Arthur Kleinman's framework for generating explanatory models (Table 1). Interviews were audio recorded and professionally transcribed verbatim in the language of the interview. We used conventional directed content analysis to code transcripts using constructs of Kleinman's framework and inductive analysis to identify additional emergent meaning. Two bilingual researchers iteratively developed a codebook which guided coding. Qualitative rigor was enhanced using recommended strategies. Representative quotes of findings were translated to English.

Results: Participants (N=23) were half Spanish-speaking (52%), a majority male (65%), and an average age of 52 years (SD ± 14.5). They were born in the Dominican Republic (48%), the United States (30%), or in other Latin American/Caribbean countries and had been living with HIV for an average of 15.6 years (SD ± 10.3).

Participants provided varying responses to questions from Kleinman's framework (Table 1). They indicated the experience of living with HIV depends on how you take care of yourself and explained that individuals who are adherent to their medications live long, healthy, vibrant lives while those who ignore their diagnosis, or its treatment, die quickly. Although receiving the initial diagnosis was difficult, over time, most participants accepted it and reported living normal lives. However, participants encountered problems such as fear of disclosure, discrimination and rejection, and feeling compelled "to keep secrets." They indicated overwhelming support for their prescribed antiretroviral therapy and did not endorse the use of alternative treatments for HIV. Inductive findings included participants' belief that living with HIV now is much better than in the past and that those who were religious or believed in God found their beliefs to be a source of comfort and/or motivation.

Implications for Translation to Practice/Further Research/Policy

Suggestions for clinicians to help alleviate some stressors faced by Latino PLWH were to respect patient privacy, offer resources to support disclosure, and demonstrate sensitivity regarding the initial diagnosis. Nurses can use this EM and/or use the guiding framework to create EMs to inform culturally relevant care for their patients.

Funding: K99/R00NR017829

Advancing Health Equity: Factors Leveraged by the Nurse Public Health Director

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Aim: To gain understanding of the nurse-trained public health director's relationship with local health department (LHD) performance and health equity work.

Background: Significant research has been devoted to exploring associations between high-performing LHDs and population health improvements, including what factors drive LHD performance. Leadership is one such factor – specifically, nurse-trained public health directors have been found to be positively associated with LHD performance as well as reduced health disparities. However, specific mechanisms underlying these relationships are unknown. This study explores the relationship between the nurse-trained public health director and certain LHD organizational factors, providing insight into the nurse leader's association with LHD performance and improved health outcomes.

Methods: A national, county-level dataset was compiled containing variables pertaining to the LHD and community demographics. We used multivariate logistic regression and count data analyses to explore the relationship between nurse versus non-nurse public health directors and engagement in ten organizational factors including: community health assessment (CHA) completion; community health improvement plan (CHIP) completion; and involvement in policy activities (overall and related to the social determinants of health [SDOH]). The final sample consisted of 1,447 LHDs.

Results: Multivariate logistic regression models showed that the odds of having completed a CHA is 1.49 times more likely, and the odds of having completed a CHIP is 1.56 times more likely, when the health department director is a nurse. Count data models predicted the nurse public health director, compared to the non-nurse, to perform 1.14 times more policy activities overall and 1.18 times more SDOH-related policy activities.

Implications: The results presented here provide valuable information regarding which organizational factors nurse public health directors appear to leverage in their work to create more effective health programs. Results suggest that nurse public health directors are more likely than non-nurses to emphasize assessment and planning in their work and to engage in policy activities which address the root causes of health inequities. This commitment persists amidst a complex network of community and organizational influences which were accounted for in this study. As such, this highlights the strong role nurses can play in developing a strong and responsive public health system and the importance of their leadership in work to facilitate equitable community health outcomes.

Funding: Robert Wood Johnson Foundation Future of Nursing Scholars - ID 566403

Improving Emergency Airway Care at a Critical Access Hospital

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Purpose: The purpose of this evidence-based project was to improve intubation outcomes by providing video laryngoscopy (VL) training to non-expert providers in emergency endotracheal intubation. The project included assessment of this training and measuring the confidence of these providers' pre and post-training.

Background: In urban and most suburban communities, healthcare providers trained in airway management are readily available. However, expert providers are not always available at rural critical access hospitals (CAH). CAHs have been designated as eligible rural hospitals by the Centers for Medicare and Medicaid Services. Such facilities are required to provide 24-hour emergency services seven days a week. Providers are typically family practice specialists, and the vast majority do not regularly perform laryngoscopy and intubation. Less experience often leads to a need for repeated attempts at successful intubation. Multiple intubation attempts are associated with a higher incidence of adverse events. A critical review of the literature supports that VL increases the first pass of the endotracheal intubation success in non-expert providers. VL is associated with a better view of glottic structures and faster intubation times.

Methods: VL education was delivered to the ten participants via a prerecorded video lecture to ensure consistent delivery of the training intervention. Providers attended an in-person lecture and hands-on training in both direct laryngoscopy (DL) and VL. After this training, these non-expert providers participated in four simulations, including standard and difficult airway settings using VL and DL. The evaluation included a rating of the view providers had of the simulated glottic area using the modified Cormack-Lehane scale (MCLS) and whether successful intubation was accomplished or not. A pre-and post-intervention survey Likert scale was used to assess provider confidence.

Outcomes: Frequency and percentage statistics were used to describe the successful or unsuccessful intubation of the simulated patients for both easy and hard DL and VL simulation cases. Means and standard deviations were reported and interpreted for the *t*-test analyses of survey questions.

Statistically significant increases in confidence ($p = .03$) were evident among providers who do not often perform endotracheal intubation. Following the educational intervention, non-expert providers achieved a better success rate using VL compared to DL, though improvements were observed for both approaches.

Providers' had better views with VL as compared to DL ($p = .04$). After the training, the project demonstrated that providers felt more confident with VL intubation ($p = .02$).

Conclusions: Following the education and simulation, all participants could intubate both normal and difficult intubations using VL within one attempt (100%). Better laryngeal views were reported using VL as opposed to DL. During the current global COVID-19 pandemic, endotracheal intubations have increased and are a high-risk procedure due to the aerosolization of respiratory droplets. VL is the recommended method for intubating patients with the virus. This training has important implications in keeping with safety for the provider and patient. Rural hospitals that rely on local providers who do not regularly perform endotracheal intubation would be prudent to provide VL equipment and institute VL training.

ABSTRACTS OF POSTER PRESENTATIONS

Addressing the Needs of Teen Parents through Inclusive Charter Schooling

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Background: Despite significant improvements, the United States leads the developed world in teen pregnancy rates. Although many interventions exist to support new moms, teenage pregnancy still presents many challenges, including employment and financial stability, education continuity, social disruption, and stigma in their communities. Additionally, having a child as a teenager increases infant-maternal health risks, such as preeclampsia, anemia, premature birth, low birth weight, and postpartum depression, primarily related to behavioral factors common in teenagers. A key challenge for teen parents is the feeling that they must choose between continuing their education and caring for their child, a need that unfortunately is not met by most public schools. It should be noted, however, that the impacts of pregnancy on a teenager's life vary significantly from one person to another, leaving room for significant influence by interventions tailored specifically to this populations' needs. One such intervention exists in Lumen High School, a public charter school in Spokane, Washington, that currently serves 40 pregnant and parenting teenagers, adding more each year. In addition to standard curriculum, Lumen also provides courses focused on healthy pregnancies and parenting. Working to overcome the devastating fact of 50% of teen mothers not completing their high school education, Lumen High School has created a judgement-free, supportive environment for pregnant individuals and parents to take care of their families while attending school and achieving their dreams.

Purpose: The purpose of this qualitative study was to identify and better understand the needs of teen parents completing their high school education, and to assess the effectiveness of a public charter school for pregnant and parenting teens in addressing those needs.

Methods: A partnership between Lumen High School administration and Washington State University researchers led to a participatory project, in which researchers designed surveys for students at the school, as well as conducted one-on-one private interviews to better understand the lived experiences of students attending Lumen. Students were recruited at the end of the academic year, 2021, following the first year that Lumen served students in this setting. Assent/consent was obtained by school staff, and surveys and interviews were completed during class time, in private rooms, via online platforms.

Results: Qualitative results demonstrated five key themes related to the experiences of pregnant and parenting teenagers at Lumen High School, in the context of the COVID-19 pandemic. These include: 1) reactions to finding out they were pregnant, 2) family support, 3) school experiences prior to lumen, 4) attitudes toward Lumen High School, and 5) challenging life circumstances. An interwoven theme of stigma was also identified.

Further Research: Results from this study should be used both to influence Lumen High School to adapt policies to better serve its students, and to demonstrate the impact of such an intervention on the experiences of teen parents across the Country. Future research should focus on combining quantitative and qualitative data to paint a fuller picture of the wants and challenges faced by the students of Lumen, as well as expanding these services to better address those needs.

Funding: Innovia: Grant number GR00008049

ADOLESCENT HEALTH

Promoting Adolescent Mental Health: Community Collaboration in a School Setting

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Purpose: The purpose of this project is to implement a sustainable collaborative program between a local middle school, parents, and community partners that promotes adolescent mental health using a preventive approach. This project will assess the utility of implementing Triple P, an evidence-based positive parenting program sponsored by the local health department, at a local middle school by evaluating changes in parents' perceived family functioning before and after the intervention.

Project Question: Can a school-hosted community parenting program improve family functioning?

Background: Youth mental illness is increasing across the globe. In Washington State, suicide is the second leading cause of death for youth 10 years and older. Locally, the county's pediatric hospital has seen a 400% increase in mental health related emergency department visits over the last four years. Nearly half of all chronic mental health conditions emerge during adolescence yet access to quality mental healthcare is extremely limited, leaving many youth without proper evaluation, diagnosis, or treatment during this critical phase of growth and development.

Brief Description: The achievement and maintenance of wellness relies on many social determinants, therefore, to successfully address youth mental health, a socio-ecological model approach is imperative. Sustainable interventions must include collaboration between families, schools, and communities; the absence of any one of these partners diminishes the outcomes. Having community supports and positive family relationships build resilience, a protective factor for mental health.

Methods: Parents and caregivers of students at a local middle school will have the opportunity to attend three different Teen Triple P – Positive Parenting Program seminars: Raising Responsible Teenagers, Raising Competent Teenagers, and Getting Teenagers Connected. Changes in parents' pre and post seminar responses to the McMaster Family Assessment Device General Functioning Subscale (GF12) will be evaluated using descriptive statistics based on parametric and nonparametric analysis as appropriate.

Expected Outcome: The expected outcome is improvement in mental health protective factors by strengthening parent-child and parent-school-community relationships.

Implications: Results from this project will be used to guide future collaborations between schools, families, and the local community in support of positive youth development.

Funding: HRSA Anew grant T94HP30874

A Systematic Review of mHealth Interventions to Promote Youth HPV Vaccination

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Purpose: This review paper aims to synthesize empirical evidence regarding the effect of mobile health (mHealth) interventions developed to improve human papillomavirus (HPV) vaccination rates among youth.

Background: HPV remains the most common sexually-transmitted infection in the U.S. and globally. Due to its high transmission rate, nearly all sexually active men and women could contract the virus at some point in their lives. Infections with high-risk types of HPV strains significantly increase the risk of developing cancers, including cancers of the vulva, vagina, penis, anus, and oropharynx (back of throat). Despite that the HPV vaccine is effective in preventing HPV-associated cancers and has significantly decreased associated healthcare costs, vaccination rates among youth remain significantly lower than the Healthy People 2030 target of 80% completion rate. Defined by the National Institute of Health, mHealth is "the use of mobile and wireless devices (cell phones, tablets, etc.) to improve health outcomes, health care services, and health research." Empirical evidence shows that mHealth interventions have high potential to address varies health issues. However, limited research has been conducted to systematically synthesize the effect of mHealth interventions on youth's HPV vaccination rates.

Methods: We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to guide this systematic review. Comprehensive research via databases (PubMed, CINAHL, PsycINFO, Cochrane Library, Scopus and Google Scholar) were conducted. Key words including "mHealth," "eHealth," "technology," "HPV vaccination intervention," "youth," "adolescent," and "HPV prevention" were used as the MeSH terms in the title to filter articles. Studies were included if they aimed to promote HPV vaccination among youth, (b) were published in English, and (c) were published between 2011–2021. For eligible articles published from the same authors, only the most recent published article was included if the samples were the same in multiple articles. Three researchers independently reviewed eligible articles and achieved 100% consensus for studies to be included in the final review.

Results: We are currently analyzing the data. The study activities will be completed by February 2022.

Implications: The findings of this synthesis will identify effective elements in mHealth interventions that have shown to improve HPV vaccination rates among youth, and may serve as a guide for future development of effective mHealth interventions to reduce HPV-associated cancers via vaccination.

Using of Gaming to Promote Vaccine Knowledge and Behaviors: A Systematic Review

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Purpose: This systematic review synthesized existing evidence regarding the effect of game-based interventions developed to improve vaccine knowledge and behaviors.
Background: Compared to natural immunity which could cause serious diseases and complications, vaccination is a safer approach to create more effective and longer-lasting immune responses and protection. Further, vaccination protect vaccinated individuals and communities from the diseases and spreading. Despite the availability of routine vaccines recommended by Advisory Committee on Immunization Practices, the vaccination rates remain suboptimal (such as influenza, HPV and COVID-19 vaccines) in certain populations. There is a growing body of literature in interventions incorporated with gamification elements to promote vaccine knowledge and behaviors. Further efforts to synthesize and critically analyze the current evidence on the effect of the game-based interventions to inform future research are needed.
Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), a combination of MeSH terms and key words were used to guide the search. The primary data bases used in the search included PubMed, CINAHL, ERIC, ProQuest, Cochrane Library, and Google Scholar. We used the terms "games" OR "serious games" OR "digital games" OR "gaming" OR "digital gaming" AND "intervention" OR "computerized intervention" OR "technology-based intervention" OR "tech-based intervention" AND "vaccines" OR "vaccination" OR "immunizations" OR "vaccine uptake" OR "vaccine acceptance" AND "COVID-19" OR "Coronavirus OR SARS-CoV-2". Sources of evidence from the systematic review or scoping review were also assessed for further review. Studies were included if they (a) were to improve vaccination rates, (b) were published in English, and (c) were published between January 2011– September 2021, (d) evaluated the effect of game-based interventions. Two researchers independently reviewed the abstracts; final articles included in this review were selected based on both researchers' consensus. They will independently conduct the systematic review using the per-determined review template and discuss the results.
Results: We are currently analyzing the data. The study activities will be completed by February 2022.
Implications: The findings of this study will provide evidence for the effect of game-based interventions on improving vaccine knowledge and behaviors. The key game elements and features shown to promote the intervention success will be presented to inform future research.

Car Crash Factors Among Adolescent and Young Adults in Middle Eastern Countries

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Background: Road traffic crashes (RTCs) are the leading cause of morbidity and mortality worldwide. The mortality rate from RTCs in Middle Eastern countries ranks third worldwide. Identifying risk factors contributing to RTCs and fatalities in the Middle Eastern region are needed in order to identify targets for education programs and evidence-based interventions to mitigate RTCs. Young males are more likely to be involved in RTC as the driver, making them a particularly vulnerable population. Therefore, the aim of this study is to identify risk factors contributing to car crashes among male adolescent and young adult drivers in Middle Eastern countries.

Methods: This study used a scoping review approach and followed Arksey and O'Malley's framework. Articles were identified through searching three data bases including PubMed, CINAHL, and Embase for studies published in English from January 2011 to April 2021. Reference lists of selected articles were also searched. This review followed PRISMA guidelines to inform the systematic screening process of articles. The methodological quality was critically appraised by using Joanna Briggs Institute criteria. Studies were included if they were conducted in a Middle Eastern country, investigated risk factors related to car crashes or injuries as the outcome, and measured any potential risk factor related car crashes as an exposure among male adolescents (age 13-17) or young adult (age 18–29).

Results: Of the 284 articles identified, 8 articles met the inclusion criteria with one additional article identified from reference lists of the included articles. The design of all 9 studies was cross sectional. In seven studies, measurement of risk factor exposures and outcomes were via self-report questionnaires. Most study participants were students in colleges and universities, aged 18-29. The majority of the studies focused on motor vehicle crashes related to driver behaviors. These studies found behaviors such as driver traffic violations (e.g., speeding), mobile phone use, sleepiness, driving experience, and alcohol use to be factors significantly associated with motor vehicle crashes among adolescents and young male adult drivers. Lastly, some factors attributed as aggravating motor vehicle crashes and contributing to injuries among young male drivers were speeding and sleeping.

Conclusions: Middle Eastern adolescents and young male drivers are at a higher risk for road traffic crashes and related injuries. This review provided insight into the risk factors that contribute to motor vehicle crashes in this underrepresented group. However, further studies are needed to identify what factors make young males more likely to violate driving traffic rules or make errors while driving. Future studies need to be longitudinal in design to crash risk factors and draw strong causal conclusions. It will be important to include objective measures of exposures and outcomes to assist in identifying reliable factors that can inform the design of targeted interventions to reduce car crashes and injuries among adolescent and young Middle Eastern males.

Dysfunctional Beliefs about Sleep, Sleep Hygiene and Sleep Deficiency in Youth with SLE

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Purpose: The purpose of this study is to describe the Dysfunctional Beliefs About Sleep (DBAS), sleep hygiene, and sleep deficiency in youth with SLE and to investigate the degree to which DBAS and sleep hygiene would account for the variance in sleep deficiency in youth with Systemic Lupus Erythematosus (SLE).

Introduction: An estimated 30-60% of youth with SLE report sleep deficiency, defined as insufficient sleep duration and/or poor sleep quality. Increasing evidence suggests that sleep deficiency is linked to reduced academic functioning and health-related problems (e.g., pain, fatigue, depressive mood, decreased quality of life) in youth with chronic disease. Among the various factors involved in sleep in youth with SLE, DBAS, and sleep hygiene play an important role in perpetuating or exacerbating sleep deficiency. However, little attention has been given to DBAS and sleep hygiene as predictors of sleep deficiency in youth with SLE.

Methods: Twenty-three youth (n=21 girls, n=9 Hispanic; mean age= 14.7 ± 2.2 years) with SLE and their caregivers participated. Youth wore actigraphy and completed online sleep diaries for consecutive 10 days, and completed Dysfunctional Beliefs and Attitudes about Sleep (DBAS-C10), Adolescent Sleep Hygiene Scale (ASHS) and Adolescent Sleep Wake Scale (ASWS). Caregivers provided demographic and clinical information. Univariate linear regression analyses were performed to examine whether DBAS and sleep hygiene predict poor actigraphy sleep (decreased Total Sleep Time [TST], Sleep Efficiency [SE], and self-reported sleep quality (sleep diary [SQ] and ASWS).

Results: The mean TST and SE measured by actigraphy were 7.0 ± 0.9 hours and 73.3 ± 6.2%; self-report sleep quality was moderate (mean SQ: 7.2 ± 1.6 [range 0-10], mean ASWS: 4.1 ± 0.7 [range 1-6]). Among the three subscales of DBAS-C10, youth with SLE had higher (i.e., worse) score on the beliefs about immediate negative consequences of insomnia compared to the score of other two subscales (beliefs about long-term consequences of insomnia, need to control the insomnia). The most highly endorsed sleep hygiene subscales were behavioral (i.e., screen time, use bed other than sleep) and stability factor (discrepancy between weekdays and weekends). There was no significant association between DBAS and actigraphy-measured sleep (TST, SE), and SQ (TST: p = .399, SE: p = .799, SQ: p = .207). Marginal negative association between DBAS and self-report sleep quality measured by ASWS was found (R^2 = .18, p = .054). We also found a significant positive linear relationship between sleep hygiene and actigraphy-measured TST and self-report sleep quality (SQ and ASWS) (TST: R^2 = .13, SQ: R^2 = .34, ASWS: R^2 = .40).

Implications: Although further studies are required in larger sample, our findings demonstrate that DBAS and sleep hygiene are importantly related to sleep deficiency in youth with SLE. Clinicians should consider assessing the beliefs about sleep and sleep hygiene for youth with sleep deficiency. Developing sleep interventions focusing on the modifiable factors are needed to improve sleep and daytime functioning in youth with SLE.

Funding: This work was funded by NIH/NINR P30NR016585 (MPI: MMH, TMW), R21NR017471 (TMW); University of Washington, School of Nursing, Research and Intramural Funding (RIFP); Hester McLaws Nursing Scholarship.

Outcomes of Sexual Health Education for LGBTQ Youth Living in a Conservative U.S. State

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Purpose: The purpose of this secondary analysis is to examine findings from a federally-funded sexual health education program for at-risk youth, focusing on sexual health beliefs and resources knowledge held by LGBTQ youth participants.

Rationale: Sexual health education is varied and inconsistent throughout the nation. This variation has created a need for the creation and implementation of inclusive and evidence-based sexual health education, especially in socially-conservative regions of the U.S. In 2012, Reach One Teach One (ROTO) North Dakota was developed as an evidence-based sexual health education program for at risk youth; currently, North Dakota law requires abstinence-only sexual education curriculum. With the LGBTQ youth being at higher risk for negative health outcomes, it is important to include the needs of these young people when delivering sexual health education. The purpose of this study is to examine characteristics of LGBTQ youth who participated in ROTO as well as their changes in sexual health beliefs and knowledge of resources as a result of the program.

Methods: We performed a secondary analysis of the high-school ROTO data for youth self-identifying as LGBTQ. Sexual health belief and knowledge of resources items were derived from other longstanding youth surveys, questions and scales validated in publications from those studies over time. Youth were identified as LGBTQ if they answered "yes" to describing themselves as bisexual, gay/lesbian, transgender, or unsure. Univariate analyses were completed on sociodemographic characteristics and study items of interest. Chi2 tests were completed comparing LGBTQ youth with "straight" peers who also participated in ROTO. Paired t-tests were done to identify within group changes from pre- and post- ROTO sessions.

Results: 266 youth completed T1 surveys; 22.6% of ROTO participants self-identified as LGBTQ. With respect to sociodemographic characteristics, LGBTQ-identifying youth were no different from their peers on most all characteristics except for knowledge of referring friends to LGBTQ resources. Overall, LGBTQ youth reported high, positive responses for sexual health beliefs and knowledge of resources in their communities at T1. Talking with a partner about condom use, knowing resources for STI testing, and self-confidence with condom use were among the 12 items that improved ($p=0.01$, $p=0.00$, and $p=0.04$, respectively) from T1 to T2 among LGBTQ-identifying youth.

Implications: These results underscore the need for evidence-based sexual health education that is sensitive to the needs of vulnerable youth. It was important to understand sexual health beliefs held by the LGBTQ youth to assure their educational needs are being met while also in the classroom context of straight-identifying teens. From this a more inclusive, evidence-based, and consistent sexual education program can be created and used in the future to improve health outcomes for all high school adolescents.

A Health Services Research Agenda Towards Ending the HIV Epidemic

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Background: HIV remains a significant health issue with approximately 1.1 million people diagnosed in the United States (US). An estimated 14% of people living with HIV are unaware of their diagnosis. The NIH Office of AIDS Research established five priorities based on the current science, including reducing the incidence of HIV; addressing HIV-associated comorbidities, coinfections, and complications (CCCs); developing the next generation of therapies; addressing cross-cutting areas of research; and, conducting research towards an HIV cure.

Purpose: Based on the state of the science and informed by the NIH priorities for HIV/AIDS research with an emphasis on Behavioral and Social Science Research (BSSR), we propose a health services research agenda targeted at ending the HIV epidemic by 2030 and beyond.

Methods: We reviewed PubMed, the Health Services Research Projects in Progress, and clinicaltrials.gov. With the rapid growth and advances in HIV research, this review was limited to published studies and ongoing projects from January 1st, 2015 to March 31st, 2021. Search concepts included HIV, health services research, stigma, and BSSR concepts (i.e., interpersonal factors, psychological resources, mental health, stress processes, engagement in care, and HIV-related health). We included studies that were US-based and English language. We excluded non-research projects, conference papers, and training programs (e.g., fellowship programs).

Findings: The review identified 622 references. Data extraction and assessments were performed on 98 studies. Ninety-one studies addressed BSSR. Most studies focused on cross-cutting areas and developing next generation HIV therapies, followed by addressing CCCs and reducing HIV incidence. There was an explicit use of theory in 51 studies. Social Cognitive Theory (n=12) was used more than any other theory, followed by the Information Motivation Behavioral Skills Model (n=6) and Syndemics Theory (n=3). From 2015 to 2017, studies increased in volume across all NIH HIV/AIDS research priorities. Only studies addressing HIV-associated CCCs and developing the next generation of HIV therapies and BSSR concepts increased between 2017 and 2019. From 2019 to June 2020, there was a decrease in studies across all HIV/AIDS research priorities except for reducing the incidence of HIV.

Discussion: Future health services research should target the NIH Office of AIDS Research five priorities with an emphasis on BSSR. Greater attention is needed to addressing HIV-associated CCCs and reducing HIV incidence. To reduce the barriers for HIV prevention, multisectoral approaches that tailor interventions to different levels of barriers and populations are needed. Studies should develop comprehensive strategies to provide integrated and accessible services by providers who are accountable for addressing a large majority of personal healthcare needs. Research should also aim to foster sustained partnerships between patients and providers in the context of family and community. A cross-cutting framework that addresses not only HIV, but also other comorbid or chronic conditions is needed to encourage comprehensive initiatives to address HIV at multiple levels (i.e., individual, societal, and structural). Lastly, research should continue to consider using BSSR to support and strengthen the development and testing of biomedical approaches (i.e., combination ART, PrEP, and PEP) to HIV prevention, treatment, and cure.

Funding: NIH National Institute on Alcohol Abuse & Alcoholism (NIAAA) Grant #T32AA025877

Activity Trackers for Women: What Works and What Does Not

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Background: Most women in the United States do not sustain recommended levels of physical activity (PA) for disease prevention and optimal health. Furthermore, women are generally less physically active than demographically similar men. This discrepancy is multi-factorial and not fully understood. Additionally, little is known about strategies for increasing PA among women. Activity trackers have been found to increase both awareness and PA in both men and women if worn daily. Thus, activity trackers should include features and designs that encourage long-term, daily use. Most activity trackers are intended for use by both men and women, but whether these devices encourage long-term use among women is unknown.

Purpose: This pilot study aimed to determine what features and designs of activity trackers appeal to women and whether devices with these attributes motivated women to be physically active.

Methods: This study utilized a mixed-method approach. Baseline measures included demographics, BMI, Physical Activity Vital Sign (PAVS), and degree of PA self-determination using the Behavioral Regulation in Exercise Questionnaire-2 (BREQ2). Apple Watch, Oura Ring, and Bellabeat Leaf were selected as activity trackers. Participants spent one week trialing each activity tracker. Participants documented daily PA levels and rated their satisfaction with each tracker's comfort, features, and effect on PA motivation. Participants also attended a focus group to share experiences and give feedback after trialing the activity trackers.

Results: A convenience sample of 15 females aged 33-69 trialed all three activity trackers. Apple Watch was the most preferred device, followed by the Oura Ring. Though reported to be attractive, the Bellabeat Leaf was not well-received. The Apple Watch and the Oura Ring were equally comfortable, but the Apple Watch was more motivating and had more desirable features compared to the Oura Ring. The Bellabeat Leaf was the least comfortable, least motivating, and had the least desirable traits. Themes from focus groups concluded that the most appealing features (1) provided real-time, visual data, (2) generally comfortable and convenient to wear during all daily activities, (3) intuitive (sensed activity and added PA data automatically), and (4) required little maintenance (e.g., charging).

Implications for Nursing: PA has significant health benefits, and adequate amounts of PA reduce the risk of developing many chronic conditions. In the United States, insufficient PA adds $117 billion in healthcare costs each year. Helping patients explore activity trackers that they find comfortable and motivating may be one way to increase PA, improve their self-efficacy, and help reduce healthcare costs.

BIPOC Nursing Students' Experiences with Help-Seeking When Under Stress

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Purpose: The purpose of this study was to gain insight on beliefs and attitudes nursing students who identify as Black, Indigenous, or people of color (BIPOC) had about their experiences with help-seeking when they were under stress.

Background: Nursing students experience many situations that lead to stress. Stress is an adaptive human response to exposure to changes requiring mental, physical, and emotional responses. The perception of stress is an individual experience that can lead to varying responses to the same stressor. Help-seeking is a behavior students can engage in to manage stress and include help to alleviate the stressor and emotional support. Unmanaged stress can have many unintended consequences, including nursing program attrition. As the U.S. population becomes more ethnically and racially diverse, the nursing workforce needs to follow suit. Achieving nursing workforce diversity can be made possible in part by retaining BIPOC nursing students.

Methods: A qualitative study was designed using individual interviews to understand BIPOC nursing students' perception of how culture, race, and ethnicity impacted their help-seeking behaviors for situations that caused them stress. The theoretical frameworks for this study included the Nurse Universal Retention and Success (NURS) model, Cognitive constructivism, and the Social Cognitive Theory of Self-Regulation. Cognitive constructivism guided the understanding of the construction of knowledge about how to manage stress. Once knowledge construction was understood, the self-regulatory behaviors of BIPOOC nursing students were explored. Finally, the principles of the NURS model were used to analyze how BIPOC nursing students' beliefs and attitudes about help-seeking for stress influenced their perceptions about success and retention.

Results: Results showed how race, culture, and ethnicity influenced the perception of the experiences that BIPOC nursing students had with help-seeking when they were under stress. Participants in the study discussed various stress experiences and their perceived facilitators and barriers to help-seeking. BIPOC nursing students expressed maladaptive help-seeking behaviors. Notably, the research revealed that BIPOC nursing students would accept the help that was offered.

Research Implications: The research offers several implications for practice and future research. Nursing programs should tailor mentorship and advisee programs in a way that help is provided without the need for solicitation by BIPOC students. Future research should be conducted to evaluate interventions designed to foster adaptive help-seeking behaviors of BIPOC nursing students. Since everyone experiences stress, nursing program leaders and educators should incorporate education that would facilitate the recognition of the impact of stress and the normalization of help-seeking for stress.

Feasibility Study to Virtually Deliver Mindfulness-Based Interventions

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Although college can be a fun experience, it can be stressful, too. The ongoing COVID-19 pandemic has exacerbated the demands for the mental health needs in college students. Mindfulness is effective to help college students stay resilient. However, most mindfulness-based interventions are delivered in-person, and the feasibility and effectiveness of interventions delivered virtually are not well known. The purpose of this study guided by the Monitor and Acceptance Theory was to examine the feasibility of two remote mindfulness interventions to reduce psychological distress in college students.
Methods and Design: This was a quasi-experimental research design for college students with three groups: (1) Weekly Zoom meetings led by a Psychiatric Mental Health Nurse Practitioner, (2) Student-driven participation using a mindfulness App and weekly reminders, and (3) Comparison group without intervention. The participants completed surveys including the demographics, Depression, anxiety Stress Scale - 21 items (DASS-21), and Five Facet Mindfulness Questionnaire (FFMQ) before and after the interventions. IRB approval was obtained.
Results: A total of 136 participants (29 in Zoom, 52 in App, and 55 in Comparison) were included in the data analyses. The majority of participants were women, and the racial / ethnical groups represented in the numerical majorities were Asian and White. Furthermore, Wilcoxon Signed-Rank Tests showed that the scores of stress were significantly lower after the intervention ($Mdn = 10.0$, $n = 28$ in Zoom; $Mdn = 12.0$, $n = 48$ in App) compared to before ($Mdn = 19.0$, $n = 28$ in Zoom; $Mdn = 18.0$, $n = 51$ in App), $z = -3.9$, $p = <.001$, $r = .52$ in Zoom and $z = -3.8$, $p < .001$, $r = .38$ in App. In contract, there were no significant differences among participants in the Comparison group. Regarding the Zoom group, the paired t-test indicated the mean scores of the FFMQ post-test significantly increased as a result of the mindfulness training ($M = 137.1$, $SD = 18.9$) compared to the pre-test ($M = 119.9$, $SD = 18.2$), $t(25) = -4.6$, $p < .001$, $d = .91$. Similarly, the mean scores of the FFMQ post-test in the App group significantly increased as a result of the mindfulness training ($M = 128.6$, $SD = 17.1$) compared to the pre-test ($M = 113.7$, $SD = 16.0$), $t(41) = -5.3$, $p < .001$, $d = .82$. There were no significant differences in the Comparison group.
Discussion: The results from this study indicate that delivering the mindfulness training through both Zoom meetings and App was feasible, and both methods were effective to reduce the levels of psychological distress and increase the levels of mindfulness skills. A major imitation includes lack of randomization. In addition to psychosocial variables, stress/resilience biomarkers should be included in the future study to measure the impact of interventions more objectively.

Funding: University of Washington

Increasing Homeless Youth Mental Health Engagement with Motivational Interviewing

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Background: Homeless youth experience high rates of mental illness, affecting between 19-50% of all homeless youth. Washington homeless youth providers report a critical need to connect homeless youth to mental and behavioral health services.
Goals: The goal of this project is to examine if motivational interviewing (MI) is an effective tool to increase mental health service utilization in homeless youth.
Objectives: If motivational interviewing demonstrates efficacy towards this goal, the objective of this project is to establish motivational interviewing as a tool to be used by nurses and providers to engage homeless youth in mental health care.
Activities: Motivational interviewing will be administered in up to four sessions. A mixed-methods design will be used to evaluate self-efficacy, utilization of mental health resources, and an understanding of the participants' experience with motivational interviewing. Self-efficacy and opinions about mental health care will be measured using repeated-measures t-tests. Descriptive statistics will describe the number of adolescents who accessed mental health treatment, along with the number of sessions implemented before treatment was accessed. After the MI intervention, semi-structured exit interviews will be conducted using open-ended questions to evoke the participants' experience with mental health services and their experience receiving the motivational interviewing sessions. Data analysis for the exit interviews will use a qualitative descriptive approach using ATLAS.ti to content analyze transcriptions of the audio-recorded interviews.
Expected Outcomes: The expected outcome of this project is to increase mental health service utilization through motivational interviewing in the population of homeless youth.

Funding: Grant number: T94HP30874, Granting Organization: HRSA

Motivational Interview for Tele Mental Health Counseling Use with College Students.

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Purpose: The study aims to evaluate the effect of motivational interviewing (MI) in increasing the use of Telehealth counseling resources among college students with anxiety symptoms. The MI will aim to reduce students' ambivalence to utilize the counseling services and increase their motivation to pursue treatment.
Background: Attending college can be the beginning of a stressful time for many undergraduate students. A literature review has shown that there is a high rate of anxiety and stress among college students. University student health centers have seen a steady increase in visits with complaints of anxiety symptoms in recent years. However, the rate of telehealth mental health counseling services, that many colleges maintain, are often underutilized. There is a need of an intervention to increase the utilization of telehealth counselling services in universities and colleges.
Method: The study will be conducted in an institution of higher learning in the Pacific North West. Students with anxiety symptoms, as identified by their providers at the student health center, will be asked by those providers if they are interested in participating. If students wish to participate, they will be asked to contact the primary investigator (PI) via email on the recruitment flyer given to them by the providers during their appointment. If eligible, the students will be asked for formal written consent and scheduled for one to two motivational interview sessions depending on their needs. The PI will follow up with the students one month after their last MI interview to ask if they followed up with the telehealth counseling service. The data thus collected from each student will be aggregated. The PI will use the aggregate data to compare the data from past studies done on Telehealth resource utilization. The base rates of telehealth counseling utilization will be used as the preintervention measures. The post-intervention measure will be participants' statements that they attended at least one telehealth appointment. Implication: The study will help student health care providers to include motivational interviewing as a tool to encourage the students to follow up with mental health counseling. The study will open up opportunities for other colleges and universities to follow suit and increase telehealth mental health counseling resource use. The study can also be expanded to include mental health conditions other than anxiety, such as depression, mood disorders, etc. Finally, the study will improve the quality of the students' mental health and improve learning.

Funding: HRSA ANEW Grant number: T94HP30874

Risk Reduction Among Young Adults with Asthma in Response to Wildfire Smoke

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Purposes/Aims: This study utilized data collected as part of a funded study assessing the feasibility of two smartphone application (app) interventions (Smoke Sense and Smoke Sense Plus) among young adults with asthma and pilot test the interventions compared to a control group. The study was conducted in partnership with the Environmental Protection Agency who developed Smoke Sense, a smartphone app designed to help people reduce their exposure to wildfire smoke. The purpose of the study presented here is to: 1. Explore symptoms experienced during periods of poor air quality; 2. Explore differences in self-reported measures of exposure reduction behaviors (e.g. go indoors, wear a mask, decrease exertion) during periods of poor air quality; 3. Explore differences in self-reported measures of symptom mitigating behaviors (e.g. medication use) during periods of poor air quality.

Rationale/Conceptual Basis/Background: Poor air quality from wildfire smoke is associated with increased asthma exacerbations and hospitalizations. Young adults are less likely to adhere to air quality alerts than older adults. Sixty-seven young adults with asthma were enrolled during the 2020 wildfire season (July-October) for the parent study.

Methods: A secondary analysis using data collected in a randomized clinical trial will be used to address each aim. Eligible participants were young adults, 18-26 years of age, who self-reported having asthma. Demographic and health information, risk perception of wildfire smoke, self-efficacy, and available resources to reduce exposure to smoke were collected at baseline. Self-reported risk reduction and symptom mitigation behaviors were collected at baseline, and weeks 4 and 8 using Research Electronic Data Capture (REDCap). Air quality was summarized as the percentage of days in the last 30 days where fine particulate matter was at least 35.5 $\mu g/m^3$ which aligns with the category “Unhealthy for sensitive groups” per the Air Quality Index for fine particulate matter. The average daily level of fine particulate matter during each participant’s exposure period was accessed from www.airnowtech.org.

Descriptive statistics including frequencies (percentages) and means (standard deviations) will be used to characterize demographic and health information. Symptoms, exposure reduction behaviors and symptom mitigating behaviors will be categorized as binary variables (yes/no). Logistic regression with no adjustment for correlation among repeated measurements across time will be used initially to analyze the relationships between the dependent variables and air quality, followed by logistic regression with random effects to adjust for correlation/repeated measurements across time.

Results: Results will inform our understanding of young adults’ access to risk reduction resources, symptoms experienced during poor air quality, and measures taken to reduce exposure and mitigate symptoms. Findings will provide insight into the theoretical basis for the risk reduction interventions (Smoke Sense, Smoke Sense Plus) tested in the parent study, including perceived susceptibility to disease and perceived severity of disease, two concepts from the Health Belief Model.

Implications for Further Research: Future nursing research will refine the Smoke Sense Plus app and test it against an attention control group.

Funding: National Institute of Nursing Research, National Institute of Health, Award Number R21NR019071

Viewing Cancer Survivor Stories: Changes in Psychological Distress

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Purpose: The purpose of this pilot study was to test feasibility of a digital storytelling (DS) intervention and preliminary assessment of acute changes on psychological distress, emotional-related processes, and heart rate variability (HRV) following pre- and post-intervention among cancer patients.
Background: Psychological distress is often experienced by cancer patients from diagnosis through treatment; and may continue into the survivorship phase. Using storytelling as a psychosocial intervention provides opportunities for emotional processing and alleviation of anxiety and depression. Recent studies have begun focusing on the neurophysiological indicators of reduced psychological distress and increased HRV, because of its significant association with emotion regulation.
Methods: Adult cancer patients (n= 15) currently in treatment (or within two years of treatment completion) were recruited through social media postings, and recruitment flyers shared via community networks. Participants' HRV was recorded for 3-minutes pre/post intervention using the HeartMath Innerbalance device. Participants were exposed to a 10–15-minute set of cancer survivors' stories. Additional outcome measures included the Profile of Mood State anxiety and depression subscales, Emotional Processing, Emotional Acceptance, and Brief Resilience Scale. Feasibility data regarding recruitment and enrollment efforts were tracked, proposing benchmarks of 50% recruitment goals and 70% retention goals to be met. Quantitative data analysis, including basic descriptive statistics, paired t-tests, and effect size (Cohen's *d*) were used to identify the mean change of the scores at baseline to post-viewing, and magnitude of the effect of viewing cancer survivor stories.
Results: Of the cancer patients (N= 35) who were screened, 17 patients were not eligible based on eligibility criteria. Of the 18 eligible, three patients declined to participate due to health issues. The remaining 83.3% (n= 15) completed the intervention. Mean age of participants was 54.5 (*SD*= 7.120). The majority of participants were female (86.7%), White (73.3%), and married (80%). Breast cancer was the most commonly reported cancer type (80%), followed by skin cancer (13.3%). After viewing digital stories, participants showed improvement in anxiety (*d*=.69*)*, depression (*d*= .36), emotional processing (*d* = .28), and emotional acceptance (*d*= .27). Post-intervention coherence HRV readings were positively and significantly associated with anxiety and emotional processing ($p< 0.05$).
Implications and Significance of the Study: Findings support feasibility. These results also demonstrated that the experience of watching stories of people going through similar emotionally distressing cancer experiences, the storyteller's (other cancer patients) point of view on their emotional expression, and their coping skills may help reduce depression, emotional distress, and improve HRV-assessed resilience. Unlike other psychosocial interventions, a technology-based digital storytelling intervention is a flexible, low-cost, and non-invasive psychosocial support vehicle. DS could be useful for patients with cancer who have limited access to other psychosocial support services. A larger clinical trial is needed to examine effects of the DS intervention and mechanisms of change. Future studies are warranted to examine the impact of DS intervention on other cancer types and diverse ethnic backgrounds.

Funding: This work was supported by the Institute for Social Science Research at Arizona State University. (Grant #: PG00751)

Predicting Deterioration in Infants with Bronchiolitis

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Purpose: Bronchiolitis can lead to rapid deterioration in children. The purpose of our study was to understand the clinical and physiological characteristics predictive of respiratory deterioration in hospitalized patients with bronchiolitis.

Background: Bronchiolitis is a common lower respiratory tract infection that carries significant clinical complications in infants. To mitigate these complications, respiratory severity scoring (RSS) tools are used to evaluate severity of illness, response to treatments, and the need to escalate care. RSS tools are composed of weighted physiological variables. These variables however are subjective and based on expert consensus or are adapted from preexisting asthma scoring tools. Literature reviews reveal a need to reassess components of RSS tools by identifying objective predictors of deterioration. There is a paucity of research evaluating specific clinical and physiological characteristics as predictors of clinical deterioration in infants with bronchiolitis requiring escalation of care. We aim to address this gap in hopes of preventing clinical deterioration by identifying characteristics of worsening distress in this patient population.

Methods: This was a single-center retrospective cohort study conducted at a large quaternary pediatric hospital. Previously healthy pediatric patients less than 2 years of age hospitalized for bronchiolitis were enrolled in the study. Data were extracted from electronic health records during two consecutive bronchiolitis winters from 2017 to 2019. The primary outcome measure was clinical deterioration that was defined as respiratory distress requiring initiation of noninvasive or invasive respiratory support within the first 48 hours from admission. Subjects who required initiation of high flow nasal cannula or positive pressure ventilation with/without intubation were compared to those who did not require such interventions. Demographic characteristics and physiologic measurements such as heart rate, respiratory rate, respiratory assessments, pulse oximetric saturation SpO2/FiO2 (SF) ratio, FiO2, oxygen therapy, level of consciousness, suctioning, cardiovascular assessments, Modified Pediatric Early Warning Score, and clinical respiratory scores were extracted from the medical records and included as predictor characteristics.

Results: Of the 584 eligible patients, 154 (26%) experienced a deterioration event and required noninvasive or invasive respiratory support and 430 (74%) did not deteriorate. Multivariable predictors of respiratory deterioration were respiratory score (odds ratio [OR]: 1.9 [95% confidence interval (CI) 1.5-2.4]), total number of retractions (OR: 2.5 [95% CI 1.6- 3.8]), SF ratio (OR: 1.0 [95% CI] 0.99-0.998), pulse rate (OR: 1.0 [95% CI 1.0- 1.1]), nasopharyngeal suctioning (OR: 5.5 [95% CI 2.6- 11.7]), and positive affect and behavior descriptors (OR: 0.3 [95% CI 0.1- 0.7]). Within the second multivariable logistic regression model, intercostal (OR: 10.2 [95% CI 6.2- 16.7]), tracheal tug (OR: 4.3 [95% CI 2.7- 7.0]), substernal (OR: 2.8 [95% CI 1.0- 7.9]), and supraclavicular retractions (OR: 10.5 [95% CI 3.1- 36.0]) were predictors of clinical deterioration.

Implications: We identified numerous characteristics predictive of respiratory deterioration for hospitalized bronchiolitis patients. Future work includes leveraging these results to develop a respiratory severity scoring tool that better reflects clinical acuity. With a score developed specifically for this population, nurses can improve patient outcomes by advocating for escalation of cares, shaping disease management guidelines, and inevitably preventing deterioration.

Funding: Seattle Children's Hospital Nursing Research Grant #24090065

Survey of Neonatal Nurses' Knowledge, Beliefs and Practices of Antibiotic Stewardship

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Background: In the neonatal intensive care unit, implementation of antimicrobial stewardship programs (ASPs) has been challenging, especially for staff nurses.
Purpose: To identify neonatal nurses' knowledge and attitudes towards antibiotic stewardship programs in neonatal intensive care units.
Methods: This was a descriptive survey study to assess knowledge, attitudes and beliefs of neonatal nurses related to antimicrobial stewardship. The survey consisted of twenty-three questions, six of which were open-ended. The questions evaluated perceptions of: general understanding of antibiotic stewardship; administration of antibiotics; information and perspective about antibiotic use; antibiotic resistance; and availability and usage of resources and education related to antibiotics. The survey was posted online for about three months on the website of a professional organization of neonatal nurses.
Results: Seventy-eight neonatal nurses responded to the survey. Thirty nine percent of these nurses were very familiar with the term antibiotic stewardship. The majority of participants did not question the treating provider about the choice, route or dose of antibiotics. The majority agreed that more education is needed to achieve the goal of incorporating principles of antibiotic stewardship more fully into practice in the neonatal intensive care unit.
Implications for Practice: Results suggest that while most nurses are familiar with the term "antibiotic stewardship", they would like to have more education on the appropriate use of antibiotics.
Implications for Research: Further studies are needed to identify nurse involvement in applying the principles of antibiotic stewardship programs while working with the vulnerable population of preterm infants.
Keywords: Antibiotic stewardship, Antimicrobial stewardship, Neonatal intensive care unit, Microbiome, Preterm Infant

Take a Breath: Partnering with Cambodian People to Reduce Neonatal Mortality

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Purpose: To describe the development of service-learning experience for students enrolled in a U.S. public university in collaboration with a publicly funded nonprofit charity, and Cambodian officials in one province to focus on reducing neonatal mortality in rural Cambodian referral hospitals and feeder health clinics.

Background: Engaging students in an international service-learning experience promotes cultural awareness, sensitivity, and humility for diverse populations and is a driver in working towards health equity. Cambodia has made strides in reducing infant mortality; however, mortality rates remain significant in rural areas. Intentional partnerships are critical for the success of global health-related projects. The aims of this project were to engage students in an international service-learning activity while simultaneously creating a sustainable multi-entity partnership with the overarching goal of promoting neonatal health equity in the rural areas.

Method: A partnership was formed between a public university nursing school, Cambodian officials governing one province, Cambodian hospitals and physicians, and ARISE International, a publicly funded charity which has strong connections to Cambodia. Before writing the global service-learning course, the lead nursing faculty established a relationship with the provincial Cambodian official and a physician whereby a health initiative, reduce neonatal mortality in rural areas, was identifed. A strategic plan was developed to train Cambodian health professionals in neonatal resuscitation and the use of continuous positive airway pressure (CPAP) machines. The university's respiratory therapy department was invited to co-lead. Relationships with Cambodian health professionals and access to hospitals were facilitated by a Cambodian official and physician. Nursing and respiratory therapy faculty and students were certified in the Neonatal Resuscitation Program and became experts in managing the CPAP machine. Community donors provided CPAP machines and neonatal mannequins for distribution. ARISE International provided information on the general state of affairs in Cambodia to consider with project development. Before the trip, extensive faculty and student education about Cambodian culture and cultural humility.

Results: In 2018 and 2019, 195 healthcare providers were trained in neonatal resuscitation and use of the CPAP machine. In 2018, training began with 16 students and five faculty at three referral hospitals and 18 clinics. Another referral hospital and six clinics were added in 2019. Twenty-one CPAP machines and 46 mannequins were placed in strategic locations. All students reported high course evaluations. Importanty, over 100 neonates were reported rescued in rural areas.

Discussion: Faculty conducted debriefings each day to assess student wellbeing and cultivate cultural growth. Many topics were addressed: the importance of teamwork; their role and awareness of a global society; humility, health inequities, and disparities; and respect for all partners' skills and knowledge. Project sustainably is essential. In 2019, we returned to the original sites for follow-up education and equipment assessment and expanded the project. COVID-19 halted the in-person experience, but the partnership remains intact and continues to evolve. Significant additions include partnering with an innovative medical technology company with recently developed low-cost, basic CPAP plus ventilator machines, and a nonprofit faith-based organization willing to provide equipment.

Implementing Head Injury Assessment Protocol in Pediatric Mental Health: A QI Project

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Purposes/Aims: The purpose of this quality improvement project is to revise and implement the current head injury assessment protocol in adherence with the best published data. The aims are twofold, 1) to increase adherence to the protocol and 2) to increase psychiatric technicians' knowledge of the head injury protocol.

Rational/Background: Among adolescents and young adults, nonsuicidal self-injury (NSSI) has a prevalence between 7.5-46.5% and an average age of onset between 12-14. Head banging is a self-injurious behavior, commonly associated with nonsuicidal self-injury (NSSI) in the context of psychiatric diagnoses. Of those who self-harm, 21-44% is in the form of head banging, which can carry short- and long-term complications ranging from concussions (mild traumatic brain injuries [mTBIs]) to neurodegenerative diseases. At a pediatric mental health facility in the pacific Northwest, the current head injury protocol does not reflect current evidence-based practices and has low adherence.

Brief Description of the Undertaking/Best Practice:

Approach. The Institute for Healthcare Improvement's Model for Improvement, which incorporates the use of Plan-Do-Study-Act (PDSA) cycles, was used as a framework for this quality improvement project.

Methods. The mental health facility is staffed with RNs and psychiatric technicians for whom there has been significant turnover rate. The intervention for this quality improvement project consisted of modifying the current head injury assessment protocol to reflect best published data which included assessment and activity levels based on assessment. The revised protocol was implemented throughout the facility after pediatric psychiatric unit nurses and psychiatric technicians completed education on the updated protocol. Study of the intervention included interviews with the psychiatric technicians and RNs. The primary measures are completion rates of head injury assessments and psychiatric technician's knowledge of the revised protocol. The staffs' knowledge of the revised protocol was assessed with a pre- and post-session questionnaire. Adherence to the protocol was measured by tracking completion rates of baseline assessments after admission and 24-hour follow-up assessments after a head injury is sustained. Staff documentation was reviewed pre- and post-implementation of the new protocol through chart review. Run charts were used to track and display data.

Assessment of Findings/Outcomes Achieved: A head injury assessment protocol that consists of current evidence-based practices will increase adherence to the frequency of assessment rates. Education will increase the psychiatric technicians' knowledge of the protocol.

Conclusions: Translation of the current evidence to assess and manage head injuries is essential. Adherence to best practices may mitigate complications from traumatic brain injuries (TBIs). The next steps in improving clinical practice will take into account improving documentation of assessments. A strategy is to create a flowsheet in the electronic medical record (EMR) to minimize disruptions in the workflow.

Photo-Journaling as a Data Collection Method in Qualitative Research

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Purpose: The purpose of this presentation is to explain photo-journaling as a data collection method for health science research and provide an example of how it was used to gather information about stress and coping in parents of chronically ill children.

Background: In the United States, the vast majority of adults, regardless of socioeconomic group, own a smartphone. This is useful for nurse researchers interested in using photo-journaling for data collection because it means most people have a camera and the ability to electronically share photographs for research purposes. Photographs allow participants the ability to capture an idea or an experience without relying on a verbal description. They allow researchers to “see” the participants’ point of view and allow researchers to participate intimately in a participant’s space. Photo-journaling provides qualitative researchers with thick descriptions of a phenomenon of interest.

Description: Participants were solicited using a purposive sampling technique and were asked to submit 1-3 photographs representing stress and/or coping to researchers. Researchers collected the photographs and then scheduled a semi-structured interview that included questions about participant photographs and what they represented. Researchers who did not participate in the interviews independently reviewed and coded photographs. The research team compared codes generated from the participant descriptions with the researchers’ evaluations to determine patterns and develop themes. Photographs used in the study assisted in providing thick descriptions of stress and coping. Photographs assisted researchers with qualitative rigor by allowing for triangulation of data.

Outcomes Achieved: There were four participants in the study. Participants submitted more photographs than were requested. One participant submitted three photographs, another seven photographs and three videos, another submitted eight photographs, and the final participant submitted ten photographs. The photographs included images of relaxed family time, medical equipment, stressful events, and representations of daily life. For most images, researchers were able to understand which images represented stress and which were coping. Submissions helped researchers better understand participant answers to interview questions.

Recommendations for Research: Because smartphone ownership is prevalent, photo-journaling is a useful data collection methodology. Submitted photographs allow researchers the opportunity to better understand a participant’s point of view, “see” what a participant might not think to describe, and potentially allow researchers access to places or experiences they would not otherwise be privy to. Researchers should plan their data analysis process in the study design phase and consider how they will handle a large amount of data.

Funding: The Jody DeMeyer Endowment for funding of the undergraduate research assistant program, Boise State University.

The Stresses Associated with Parenting a Child with Chronic Illness during COVID-19

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Background/Rationale: Nearly 20% of children under the age of 18 had a special health care need, representing a total of 14.6 million children nationally. Parents of a child with a chronic illness are more likely to experience stress, anxiety, depression, and post-traumatic stress disorder. Over 50% of these parents reported depressive symptoms and only half reported coping adequately. The COVID-19 pandemic began in the United States (US) in early 2020. Most communities in the US faced lockdowns by March 2020, where non-essential travel was discouraged, schools were closed, masks were worn, and supply and workforce shortages were common.

Purpose/Aims: The purpose of this exploratory descriptive study was to describe stress in parents of a child with chronic illness during the COVID-19 pandemic.

Methods: Parents were invited to participate through a local non-profit organization whose mission is to support families of children with a chronic illness in the Northwest. Interested parents (n = 34) were emailed a link to the questionnaire which included demographic questions, the Pediatric Inventory for Parents (PIP), and 2 open ended questions about caring for their child during the COVID-19 pandemic.

Results: Parents in this study experienced extremely high levels of stress. The means of the PIP-F (M = 146.6; SD = 20.5) and PIP-D (M = 141.9; SD = 23.9) were high and significantly higher than previous studies. There was a statistically significant positive correlation between parent stress and the age of the child and the length of time since diagnosis. In response to the open-ended questions, parents reported increased stress due to isolation, lack of resources, and concern for the mental health of other children in the household.

Implications: COVID-19 likely exacerbated feelings of stress for parents of children with chronic health conditions. Although unprecedented, COVID-19 shed light on the existing fragility and high stress of parents of chronically ill children. Pediatric nurses not only care for children, but must be advocates for parent mental health. Future research should be aimed at interventions to reduce stress and/or improve coping within this population.

Childhood Leukemia and Pesticide Exposure in California’s Central Valley

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Childhood leukemia represents 25.1% of all new childhood cancer cases. It is more prevalent in Latino populations and has been associated with exposure to agricultural pesticides. California is among twelve U.S. states with the highest rates of childhood leukemia. Fresno County is the largest agricultural producer in California, it has one of the largest populations of Latino agricultural workers in California, and is also the top utilizer of agricultural pesticides in California.

The SEER research plus database was utilized to determine the rate of age-adjusted childhood Acute Lymphoblastic Leukemia (ALL) in Fresno County during the years 2000-2018. The rates of ALL were higher across all pediatric age-range groupings compared to the other counties included in eighteen registries who supplied data for the same time frame. Analysis to determine the significance of the increased ALL rates in Fresno County is in progress.

The goal of this study is to determine if Fresno County children are at increased risk for ALL, the most common childhood leukemia. Fresno County is the fifth largest county in California, encompassing 5,958 square miles. While nearly half of Fresno County’s land is utilized for agricultural, the other half includes metropolitan areas. This study is the first phase of a larger study that will analyze ALL risk by zip-codes in Fresno County to determine if children who live in zip codes assigned to rural agricultural areas have a higher risk than children living in metropolitan or urban zip codes. This data is particularly relevant when targeting educational outreach programs to prevent pesticide related cancers.

Using the SNOO Bassinet as an Adjunct Treatment for Neonatal Abstinence Syndrome

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Purpose: The purpose of this study is to compare the use of a SNOO bassinet versus a standard bassinet on Neonatal Abstinence Syndrome (NAS) Finnegan scores, sleep patterns, pharmacologic treatment, and length of stay (LOS).

Background: Infants exposed to opiates during gestation are at risk of developing NAS. NAS symptoms occur due to opiate withdrawal and include neurological, gastrointestinal, and central nervous system disturbances. Infants with NAS typically require postnatal opioid treatment, sleep less, experience longer hospital stays, and demand more nursing time to actively comfort the infant. Between 2000 and 2012, rates of NAS quadrupled. Infants with moderate to severe NAS are typically treated with oral opioids, and then weaned over days to weeks. Pharmacological treatment of infants can be prolonged and is associated with increased LOS in the Neonatal Intensive Care Unit (NICU) and estimated charges of up to $90,000 per admission. Non-pharmacologic interventions, such as swaddling, decreased stimulation, and parental presence have been shown to decrease the length of stay and cost of care. The SNOO bassinet was designed to aid infants' sleep habits through mechanisms of motion and white noise that cycle through five different levels to respond to an infant's crying. The SNOO may be effective in providing comfort to infants with NAS.

Methods: Twenty infants will be enrolled in this multicenter randomized controlled trial pilot study to compare differences in NAS Finnegan scores, sleep patterns, pharmacologic treatment, and length of stay when using a SNOO bassinet versus a standard bassinet. To determine the difference in withdrawal scores, the highest Finnegan score during the hospitalization will be assessed and analyzed using a repeated measures ANOVA test. To determine differences in sleep, nurses will track amount of time the infant slept in a bassinet and the two groups will be averaged and compared. To quantify differences in LOS and amount of pharmacological treatment for NAS, the Mann Whitney Test will be used. All analyses will be done by a blinded statistician and conducted within and between clinical sites to see what, if any, effect that pre-existing differences in standard of care have on the outcome measures. Institutional Review Board approval was obtained for this study.

Results: We are anticipating data collection to be completed by March of 2022 and presentation of results available by April 2022. We hypothesize that infants receiving treatment with the SNOO bassinet will have increased sleep, decreased need for pharmacologic treatment, and shorter LOS.

Implications for Translation to Practice and Future Research: The incidence of NAS remains persistently high, corresponding to the opioid epidemic nationally. Providers are seeking alternative methods to treat NAS that do not involve excessive doses of narcotic and result in long hospitalizations. A bassinet that responds to a crying infant and soothes them to sleep may present an additional tool that can be used to manage infants with NAS and decrease the need for significant pharmacological treatment. A full study needs to be completed to assess the results.

Keywords: Infant, Neonatal Abstinence Syndrome, smart bassinet, SNOO, nonpharmacologic treatment

Effects of Multimorbidity on Caregivers of Patients with End-Stage Liver Disease

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Background: Caregiver stress and burden associated with caring for a family member with a single chronic severe illness is well established. Caregivers experience both physical and emotional burdens related to caregiving. Research has shown an increase in mental comorbidities such as depression and anxiety among caregivers of patients with various chronic illnesses. Depressive symptoms associated with the emotional burden of caregiving can negatively affect caregiver health and quality of life (QOL). However, the burden and psychological impact of caring for individuals with more than one concurrent chronic illness are less understood.
Purpose: To examine the relationship between caregiver depression, burden, and QOL in a cohort of patients diagnosed with end-stage liver disease (ESLD) with at least one additional co-occurring chronic illness (multimorbidity) and their caregiver.
Methods: Secondary analysis of baseline survey data from a large longitudinal study was conducted with patients with ESLD and their primary caregivers. Participants were recruited from liver clinics within two health care systems. The caregivers (≥ 18 years) were a family member, significant other, or a close friend identified by patients (≥ 21 years). Patients and caregivers completed the Patient Health Questionnaire (PHQ-9) and SF-36. Caregivers also completed the Multidimensional Care Index (MCI). The Charlson Comorbidity Index and liver disease specific comorbidities were obtained from medical records. Descriptive and comparative statistics were used for the preliminary analysis.
Results: Data from a total of 189 patient-caregiver dyads were included in the analysis; 67 patients and 142 caregivers were female. The majority were spouses/partners (~58%), average age was about 57 years (SD_{PT}=13.1 & SD_{CG}=11.0). The majority of patients (88%) had at least one additional comorbid condition, with about 45% of patients having a mental comorbidity. Mean PHQ-9 scores for patients and caregivers were 9.7 (SD=5.9) and 4.9 (SD=5.1), respectively. Caregivers of patients with 2 or more multimorbidity (M=5.12, SD=5.28) compared to caregivers of those with only ESLD without any comorbidities (M=2.95, SD=2.97) had higher depressive scores. This difference was not statistically significant *t*(184)= -1.88, p = .06. Multimorbidity was also associated with worse patient *t*(184)= 1.93, p=.055 and caregiver *t*(182)= 1.76, p=.081 mental QOL and significantly affected patient's physical QOL t(184)= 1.70, p=.008.
Implications for Translation to Practice/Further Research/Policy: The presence of at least one additional comorbid condition (physical or mental) in patients with ESLD were found to relate to caregiver depression and worse mental QOL but not burden. In particular, health care professionals and nurses who interact with caregivers of patients with ESLD should assess these caregivers' mental health and symptoms and facilitate tailored interventions. Future analyses and research should explore and identify factors in both patients with multimorbidity and their caregivers as a dyad.

Funding: National Institutes of Health/National Institute of Nursing Research (1 R01 NR016017-01)

Dysphagia and Risks for Malnutrition in Patients with Heart Failure

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Purpose/Aims: This study aims to evaluate the usefulness of repetitive swallowing test (RSST) and measurement of left atrial size (LAS) as predictors of dysphagia and risks for malnutrition in adult patients with heart failure.

Rationale: 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 is a risk factor for malnutrition; Malnutrition can cause cardiac cachexia; and Cardiac cachexia can lead to further sarcopenia and weakening of the muscles used for swallowing and mastication. Esophageal ischemia and nerve plexus compression due to prolonged exposure to increased external pressure from the left atrium and left ventricle can cause muscle fatigue in the proximal esophagus and disturbed peristalsis. The anatomical location of the left atrium being anterior to the esophagus can cause dysphagia in the presence of left atrial dilatation, which is a marker of poor prognosis in patients with heart failure. Dysphagia can also increase the risk for aspiration pneumonia regardless of diagnosis.

Methods: A prospective design will be utilized in this study. The patient's ability to perform repetitive swallowing will be done by administering the RSST. The test is performed with the patient sitting up. The patient is instructed to swallow their own saliva as many times as possible in thirty seconds while the observer assesses the frequency of swallows by palpation or inspection of the larynx. Five swallows or more in thirty seconds indicates an absence of dysphagia. Less than five swallows in thirty seconds presence of dysphagia. The presence of left atrial enlargement will be determined using the most recent echocardiogram. The patient's baseline nutritional status (height, weight, arm circumference and triceps fold) will be measured at the time of the dysphagia evaluation.

Anticipated Results: Although pending, we anticipate that RSST and LAD can potentially be clinically feasible evaluation methods of dysphagia to assess risks for malnutrition in patients with heart failure.

Significance/Implications for Translation to Practice/Further Research: Findings from this research may lead to the development of low cost, non-invasive assessment tool to identify heart failure patients with dysphagia. Early detection may assist in early referral to speech therapy and nutritionist/dietitian to reduce the risk for morbidity and mortality resulting from malnutrition and cardiac cachexia. The presence of dysphagia may be a warning sign in patients with advanced heart failure for early evaluation for advanced therapies or cardiac transplantation.

Sleep Attitudes, Beliefs, and Practices in Inflammatory Bowel Disease

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Purpose: To understand the sleep attitudes, beliefs, and practices of those with Inflammatory Bowel Disease to inform future self-management interventions that improve sleep outcomes and consequentially impact both health and quality of life.
Background: Inflammatory bowel disease (IBD), a chronic gastrointestinal autoimmune disease, affects 3.1 million Americans. Sleep plays a critical role in the body's inflammatory and immune responses. A majority of those with IBD report fatigue and poor quality of sleep which can negatively impact work productivity, school attendance, and quality of life. Additionally, poor quality of sleep increases the risk of IBD disease relapse by three-fold. Beliefs and attitudes towards sleep as well as overall sleep hygiene practices can impact an individual's quantity and quality of sleep, and daytime sleepiness. Thus, understanding the beliefs and attitudes as well as sleep hygiene practices of those with IBD are necessary to develop future self-management interventions that bolster adaptive behaviors and beliefs.
Methods: Adult IBD participants were recruited in Seattle, Washington from fall 2019 to summer 2021. Participants were eligible if they were between the ages of 18-55, diagnosed with IBD, and not currently using corticosteroids. After informed consent, participants completed a baseline survey collected via REDCap which included the brief Dysfunctional Beliefs and Attitudes about Sleep Scale (DBAS-16), Sleep Hygiene Index (SHI), and Pittsburgh Sleep Quality Index (PSQI). DBAS-16 is a 16-item instrument that measures dysfunctional beliefs and attitudes about sleep in four subscales: consequences of insomnia, worry about sleep, sleep expectations, and medications. A higher score indicates more maladaptive beliefs and attitudes about sleep. The SHI is a 13-item instrument that assesses sleep hygiene practices; a higher global score of SHI is indicative of poorer sleep hygiene practices. The PSQI has 19 self-rated questions that measure sleep quality; a score >5 indicates poor sleep. Data analysis was conducted using R software.
Findings: A total of 27 IBD participants completed the baseline survey. The mean age was 33.2 years, and the sex distribution was 16 females and 11 males. Based on the PSQI, 59% (n=16) of the sample were poor sleepers. The mean global score for DBAS-16 was 3.7 (SD: 1.3). The subscale of sleep expectations had the highest mean score (7.0), indicating dysfunctional beliefs regarding needing 8 hours of sleep and catching up on sleep the following day. Participants with poor sleep scored significantly higher on the worrying about sleep subscale than good sleepers (p=0.01). The mean SHI score for the sample was 17.5 (SD: 5.1). The top three sleep hygiene items needing improvement were: "I do something that may wake me up before bedtime", "I think, plan or worry when I am in bed", and "I go to bed at different times from day to day."
Implications: These findings indicate the need to further explore the barriers to healthy sleep habits in the IBD population. When working with IBD patients, clinicians should consider evaluating sleep quality, discussing with IBD patients about their beliefs and attitudes, and educating patients on sleep practices that can compromise healthy sleep.

Funding: NINR P30 Center for Innovation in Sleep Self-Management (P30NR016585), Omics and Symptom Science Training program at the University of Washington School of Nursing (T32NR016913)

Transfer of Patients with Severe Congenital Heart Disease to Adult Care during COVID-19

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Introduction: Due to major advances in medical and surgical care over the past 40+ years, more than 90% of congenital heart disease (CHD) patients are surviving well into adulthood. In 2005, it was estimated that for the first time in history, there are more adults living with CHD than children. Currently, there are estimated to be over 1 million adults with congenital heart disease in the United States and this number continues to rise approximately 5% each year. Because treatments for CHD are not curative, those with severe CHD require ongoing specialized care as progression of CHD may lead to heart failure, arrhythmias, or sudden cardiac death. Transition programs prepare patients 12 years and older for transfer to adult congenital heart disease (ACHD) centers. Transfer to adult care typically occurs between ages 18-21 but can be as late as 24 years of age. About half of pediatric patients with CHD are at risk for unsuccessful transfer to ACHD centers, leading to care fragmentation and increased morbidity/mortality.

Our major health care center has the only ACHD facility in the state, located at the northernmost border, creating difficult access for those living in remote areas. While pediatric CHD outreach clinics to remote areas continued during the COVID-19 pandemic, adult CHD outreach was suspended as of March 2020.

Purpose: (1) To examine transfer of patients diagnosed with severe complexity CHD who live in remote areas of the state during the COVID-19 pandemic to ACHD. (2) To determine the outcome of unsuccessful transfers (retained in pediatric care, transferred elsewhere, or lost to follow up)

Method: A retrospective record review will examine transfer status of patients diagnosed with severe CHD who received transfer orders to ACHD and were due to transfer between March 2020 to current. A secondary phase of this study will examine patients diagnosed with severe CHD who were due to transfer to ACHD (based on age criteria) during this time period but did not receive orders for transfer. Descriptive statistics will be used to determine proportion of patients with successful transfer to ACHD, retention in pediatric cardiac care, transfer elsewhere, and loss to follow-up. The $\chi 2$ test will be used to analyze comparisons between groups for categorical variables, and analysis of variance will be used to analyze comparisons between groups for continuous variables. We will collect data on covariates, including type of CHD, primary cardiologist, zip code, and age. The study has been approved by the Institutional Review Board.

Results: Preliminary data analysis is in progress and will be available to present at the WIN conference 2022.

Funding: AACN Continuing Professional Development Scholarship, Oregon Health and Science University Deans Scholarship.

CHRONIC ILLNESS

"How Will We Tell Them?" Revealing a Parent's Cancer Diagnosis to Children

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Background: Cancer survivors undergo debilitating treatments that challenge health-related quality of life, especially during active disease or relapse. A critical issue for a parent living with cancer is deciding how to communicate with the young children living at home about the parent's diagnosis/prognosis. Parents want to protect their children from the effects of their illness, which in turn may constrain both the communication process and the disclosure of the content.

Purpose: The purpose of this study was to explore the process by which a cancer survivor, and parenting partner, planned and disclosed the cancer diagnosis/prognosis to their children (7–18 years old) living in the home.

Methods: Corbin and Strauss's (1990, 2008, 2015) grounded theory methodology with a critical theorist lens guided the interview process and the development of a substantive theoretical model. The substantive theory provided a definition of categories, subcategories, and narrative exemplars.

Results: The emergent grounded theory consisted of a core category, *Disclosing a parent's cancer diagnosis,* and five predominant categories: *Discovery, Emotionally adapting, Telling the children, Children's emotional reaction, and Role changes*. The categories explain how the parents made meaning of the cancer diagnosis and consequently disclosed the diagnosis to the children who, in turn, shaped their personal meanings over time. Each family chose what worked best for them. Similarities among the participants facilitated the identification of the categories. The disclosure is influenced by the predominant categories. *Discovery*, which, explicated waiting for the cancer diagnosis/treatment plan, researching the diagnosis, and starting the conversations with the parenting partner. *Emotional adaptation* identified the parents' emotions and reaction after they received the initial diagnosis, their fears, their need to be strong, and how they wanted to get a handle on their feelings prior to disclosing the cancer to the children. *Telling the children* elucidated the actual process of disclosing the cancer diagnosis to the children and what the parents felt was important regarding how and what to tell the children. *Children's emotional reaction* referred to the parent's witnessing an emotional reaction from the children when told about the parent's cancer diagnosis. Most of the children became hypervigilant about the parent with cancer. *Role changes* occurred in the families. For example, some of the participants knew they would have to take time off from work and parents strategized how to include the children in helping with chores around the house so the child felt needed.

Implications: This study generated a grounded theory and descriptive evidence of the ways in which parents communicate a diagnosis of cancer to their young children. This foundational knowledge will ultimately result in the development and testing of communication modules that will guide how nurses can coach parents in effective tactics for disclosing cancer to young children. This study's findings provide evidence that telling children is a process that evolves both across time and during stages of cancer survivorship. This research may lead to the expansion and clarification of best practices regarding disclosing a parent's cancer diagnosis to the parent's children.

Academic-Practice Partnership Builds Student Nurse Competencies in Ambulatory Care

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Background: Public Health Seattle King County (PHSKC) and Seattle Pacific University (SPU) School of Nursing have partnered to create a training center of excellence for undergraduate baccalaureate nurses who have an interest in providing primary care to medically underserved populations (MUP). This academic-practice partnership is afforded by a 4-year Health Resources and Services Administration; Nurse Education, Practice, Quality and Retention grant awarded to PHSKC in 2018. The project called "Ambulatory System Supported by Education and Training (ASSET)" is currently in project year four.

Purpose: The purpose of this project is to create a training center of excellence utilizing the dedicated education unit (DEU) model to build student nurse competencies in ambulatory care and public health nursing. This transition to practice experience is designed to foster knowledge, skills, and attitudes to care for MUP in ambulatory care and public health settings. The intended outcome is a highly competitive pool of new graduates prepared for direct entry to ambulatory care and public health specialties.

Methods: PHSKC and SPU implemented a DEU model for nurse education in public health primary care settings. This innovative model allows for senior practicum immersion, called "ASSET Fellowship", in a longitudinal clinical experience where foundational concepts in social determinants of health, trauma informed care, health equity, social justice, harm reduction, motivational interviewing, and patient centered care are practiced. Fellows apply these concepts to the nursing process as they manage chronic disease, population health, behavioral health, and substance use disorders. The DEU model provides students with consistent, expert, reflective and relationship-based mentorship throughout the fellowship.

Progress is monitored through survey data collection with the General Self-Efficacy (GSE) scale, Clinical Learning Environment, Supervision and Nurse Teacher (CLES-T) scale, Seminar Training Surveys, Preceptor Evaluation of Students, Academic-Practice Partnership Evaluation, and a daily Student Service Logs.

Results: The ASSET grant is currently in project year four. Preliminary evaluation data show the following findings.

- DEU students experienced positive self-efficacy in 15 out of 16 GSE metrics compared to non-DEU students.
- CLES-T results suggest better outcome for DEU students in 24 of 34 metrics compared to non-DEU students.
- The Preceptors' Evaluation of Students reveals staff value the precepting role and report the fellows greatly contribute to the agency in positive ways.
- Seminar Training surveys consistently show increases in students' abilities, and knowledge related to training topics.
- The Academic-Practice Partnership Evaluation show increasing collaboration and process development over the first three years of the grant.

Conclusions: To date, the data suggest that this innovative model of academic-practice partnership and DEU training is improving student self-efficacy, skill attainment, and enhancing staff satisfaction.

Implication to Nursing Practice: Academic-practice partnerships are essential for preparing student nurses for direct entry to ambulatory care and public health practice. The DEU model in a public heath primary care setting prepares nurses to work with MUP grounded in principles of health equity, social justice, and trauma informed care. Further exploration of the DEU model in ambulatory care is needed to assess efficacy of building nursing competencies, nurse recruitment, retention, and staff satisfaction.

Funding: Health Resources and Services Administration (HRSA) Nurse Education, Practice, Quality and Retention (NEPQR) grant UK1HP31698

Barriers and Facilitators to Developmental Services for African Americans

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Purpose: The purpose of this qualitative, pilot study on the barriers and facilitators to developmental screenings and the utilization of early intervention services to medically underserved and low-income African American (AA) parents of children with intellectual and developmental disability (IDD) is to 1) assess the influence of family and neighborhood environment on ideas concerning child development, developmental delay, IDDs, and early intervention services, 2) explore the health work of parents within the home, as it pertains to the developmental tracking of their children, and 3) learn about the experiences of the families in seeking and obtaining timely developmental screenings and navigating the healthcare system.

Background: The American Academy of Pediatrics (AAP) has specific guidelines in place for children brought in for well-child checks. At every visit no matter the age, providers are to conduct developmental milestone assessments. At 9, 18, and 30 months specifically, validated developmental screening tools are to be used; however, timeline adjustments should be made whenever parental concerns are expressed. With regard to autism spectrum disorder (ASD), validated screening tools are recommended at 18 and 24 months. The most critical developmental period for children is birth to age five; therefore, it is crucial that screenings are done on a timely basis. In spite of developmental screening guidelines in place by the AAP, AA children are experiencing disproportionately higher rates of missed screenings, and underutilization of early intervention services. As a result, AA children remain undiagnosed until later in their school years, and are at an increased risk of the development of long-term severe symptoms such as mental health and behavioral challenges, and poor academic performance.

Methods: As a preliminary pilot study, semi-structured interviews will be conducted either on a video conference platform (e.g., Zoom) or over the telephone with n=4 AA parents of children with IDD. The study will be submitted for IRB review for possible exemption. All interviews will be recorded and transcribed. The PI will carefully review all transcripts to verify accuracy, and all participants will be anonymized. Interview transcripts will be coded, and narrative analysis will be used to identify common themes throughout regarding parental navigation of the healthcare system and challenges faced.

Results: Pertinent demographic information (e.g., race/ethnicity, age, formal education, employment, household income) will be obtained and represented in Table 1. A summary of themes will be displayed, with recurrent themes as the main focus, organized into Figure 1. If similar to the reviewed literature, themes may include problematic relationships with children's primary care providers (including implicit bias of providers and a lack of cultural competency), stigma within the community, poor access to quality care, and the desire for more community-based programs.

Implications: Although the overall health of the nation has improved over the years, it has not happened equitably for racial and ethnic minorities. This study will help lay the groundwork for future studies that will explore interventions to help optimize developmental screening and participation in early intervention services for AA children, with the goal of improving long-term health outcomes.

The Impact of the Pandemic on Opioid Prescribing Best Practices in Primary Care

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Introduction: Primary care providers are responsible for approximately 50% of opioid prescriptions provided. Approximately one quarter of patients prescribed opioids misuse them. While the Centers for Disease Control (CDC) put the Opioid Prescribing Guideline in place in 2015, implementation of these guidelines in practice has been a challenge. In an attempt to improve the best practices, a regional Controlled Substances Steering Committee was formed to address the organizations overarching concern for opioid use disorder and associated deaths. Sullivan's empirical-rational strategy was utilized. Over 2 years, identified "Clinic Champions" in ten affiliated Washington State primary care clinics attended quarterly educational meetings regarding opioid best practices and functions of the electronic medical record (EMR). Biannual clinic visits were integrated to help better distribute the education and best practices presented, however little progress was noted until a one-time succinct educational webinar intervention was utilized. The webinar was shared with staff, including providers, and focused on education on proper use of the electronic medical record for documenting opioid prescribing best practices. Additional data was captured by clinical staff or "champion" via a registry to help monitor best practices. Significant improvement was noted following the webinar intervention, however, less than a year later, a pandemic stressed the healthcare system and resulted in changes in operations and finances. Providers and staff were overwhelmed with decreased staffing, new clinic protocols, telehealth platforms, safety, patient, and facility demands. According to the complex adaptive system, individuals at clinic interact and influence each other resulting in adaptation as needed to ensure that the most important issues are addressed.
Purpose: The purpose of this research was to determine if the healthcare staff and providers were able to utilize the complex adaptive system to mitigate the impact of the pandemic on the ability to persevere in adherence and monitoring of opioid best practices to minimize potential for opioid use disorder and opioid related deaths.
Methods: Registry data collected following the one-time educational webinar intervention was compared with registry data collected during the pandemic over a year following the intervention. Due to constraints, "champion" meetings were reduced, occurring biannually, and only one visit to each clinic was made during the year.
Results: Data is currently under analysis. Initial results suggest that the highly functioning clinics were able to use the complex adaptive system to prioritize opioid best practices and continued to adhere to and monitor opioid best practices. Whereas, clinics with staff who had less ability to influence each other were less likely to maintain opioid prescribing best practices.

Weight Loss Consultation in a Primary Care Setting

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Purpose: This quality improvement project aims to study the effectiveness of an educational session for primary care providers focused on initiating weight loss consultation during clinical visits on overweight and obese patients.

Background: Obesity has become a rising health concern; currently, approximately two-thirds of United States adults are overweight or obese. Obesity increases the risk of cardio- and cerebral-vascular diseases, type II diabetes, arthritis, and certain cancers. In addition to causing these adverse health conditions, obesity also burdens our economy, increasing U.S. healthcare costs by $149 billion annually. Primary care providers play a vital role in reducing the obesity epidemic by addressing obesity risks and promoting healthy lifestyle changes. Alarmingly, only 35% of overweight or obese patients report weight loss consultations with their providers. The primary reasons cited for inadequate weight management talks include a) providers feel awkward talking about their patients' weight, b) providers are unsure how best to address the sensitive matter of obesity, c) providers lack confidence in the consultations' resulting in weight loss, and d) providers feel clinical visit time restraints prohibit weight loss discussions. These factors highlight inadequate provider weight loss consultation education. The discrepancy between the lack of discourse on weight loss and the urgent need to address the obesity epidemic prompted this education program to ease provider discomfort, improve provider confidence, and reduce the taboo nature of weight loss consultations.

Methods: Providers will participate in a 30-minute onsite in-person education session including a PowerPoint presentation and a reference guide with a list of open-ended questions to initiate weight loss consultations. The session will offer guidance on initiating a conversation about weight management, asking nonjudgmental weight-related questions, and effective weight-loss referrals. The session will also include role playing to encourage group discussion and reinforce the teaching. Prior to and immediately following the educational session, providers will complete a 5-question Likert scale survey to assess their willingness, competency, and resourcefulness regarding weight loss consultations. There will also be a three-month trial period for the providers to apply the skills learned in the educational session to their practice. Providers will document whether they provide a weight loss consultation during a patient's clinical visit and whether the patient welcome or reject the topic.

Outcome: The pre- and post-survey scores will be compared to determine whether providers feel more willing, comfortable, and prepared to conduct weight loss consultations. Statistics data of the weight loss consultations in the three-month trial will also be collected to evaluate the effectiveness of the educational session.

Conclusion: Despite the well-known benefits of maintaining a healthy weight, primary care providers still avoid talking to patients about weight management, mainly due to inadequate training on initiating sensitive topics such as obesity. We anticipate this educational session focused on practical solutions to initiating weight management discussions will increase providers' confidence and willingness to talk about weight loss during a patient's clinical visit. If the trial education session shows effectiveness, it will be implemented throughout the clinic, encouraging healthcare providers to make weight loss consultations routine.

Caregiving Lifelines: Understanding the Patient and Caregiver Perspective

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Background: The majority of worldwide "caregiving" for the sick takes place in the home, by a family member who is unpaid. Family caregiving dyads are at the center of healthcare however little qualitative research has been conducted to explore the aspects of this relationship that promote both the patient and the caregiver's sense of effective healing during this time. What makes the patient feel like they are being cared for well? What makes the caregiver feel effective in their role? How do they relate to one another in a way that promotes healing?

Objective: The intent of this investigation was to uncover themes on what works in the caregiving relationship between family members and to share those findings with the broader public in an engaging and easily understood way. The findings are being written in a "Guide" that utilizes three complementary approaches to imparting the information: 1) fictional characters' narratives in caregiving situations demonstrate "what works", 2) interviewees' quotes will serve as "lifelines" for the reader's sense of support, and 3) humorous illustrations both narrative and pictorial will offer an alternative perspective on each topic.

Methods: A qualitative, thematic analysis was conducted using Jean Watson's Theory of Human Caring framework. Fourteen key informants who self identified as both the "patient" and "caregiver" on separate occasions over the last three years were interviewed. Interviews took place via zoom during COVID-19 lockdown. All interviewees reflected on past instances of being cared for and caring for someone else in their defined family system. Four open-ended questions were given to participants prior to the interview. Interviewers used reflexivity during the interview to explore topics more in depth. Interview coders were trained and demonstrated acceptable inter-rater reliability. Triangulation of data was achieved through follow up surveys of each participant.

Results: Empathic and reflective communication was identified as the single greatest tool utilized in both the role of patient and caregiver to create a healing and positive environment. In addition, patient's reported being well cared for if they perceived being "heard", "independent", and "having purpose" by their caregiver. Caregivers reported feeling effective in their role if they had access to supportive resources and utilized the practice of humorous storytelling to describe their experience.

Conclusions: The family dyad between patient and caregiver promotes healing and a sense of wellbeing when each role engages in specific activities. Empathic listening is central in both roles, not just the caregiver. Activities that promote patients' perception of being "heard", "maintaining independence of decision-making", and "continuing to have a purpose outside of getting well" was critical to every patient. Activities that promote the caregivers' sense of having easy-to-access resources in the community as well as a regular practice of a story-telling style that incorporates humor and laughter was critical to a sense of wellbeing and effectiveness in the caregiving role across all caregivers. Future quantitative research directions are suggested to uncover how the family patient-caregiver dyad may be better supported as patients leave the acute care setting and reenter the community.

Climate Change, Sustainability, and Environmental Content in US Nursing Curricula

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Purpose/Aims: The purpose of this study is to survey nursing education programs in the United States to evaluate the presence of curricular content related to environment, sustainability and climate change.

Rationale/Background: Numerous studies released over the past 30 years by the UN's Intergovernmental Panel on Climate Change (IPCC), have reinforced the health hazards associated with climate change. Significant health issues related to climate change may include those from direct impacts (heat waves) and indirect impacts (such as poor air quality, enhanced storms and hurricanes, changes in agriculture, and impacts to water supplies). Nursing students need to be educated about these impacts, and how nursing's advocacy role could play a part in both mitigation of risk and adaptation to a new climate reality. Because these areas are typically not addressed in undergraduate nursing programs, it is important to identify what is currently being taught in order to assess the need for inclusion of specific content on this set of topics.

Methods: Based on research conducted in Canada in 2010 (Powers & Kennedy), the current study utilizes a survey tool containing questions regarding education of nursing students about climate change, environmental sustainability, 'green initiatives' undertaken to reduce greenhouse gas emissions or pollutions at the program/school of nursing, and formal committees to address such issues at the program/school/ or college/university level. A 2018 pilot study covering nursing programs in the Pacific Northwest and California utilized the same survey tool to determine environmental, sustainability, and climate change content in nursing curricula. Then as now, the researcher has partnered with a social & economic sciences research center at her university to deploy the survey tool to the expanded national list of nursing programs.

Results: As of October, 2021, the final contact list utilized by the study was comprised of nursing educational institutions listed on ACEN and CCNE websites. After removing duplications, institutions located outside of the U.S., and institutions that only have Practical Nursing programs, the final contact list consisted of 1711 institutions. An invitation and a reminder email were sent to Chief Nurse Administrators (Program Director, Dean, Chair, Department Head). To date, 202 institutions have completed the survey and one program is permanently closed. This survey will have three more email reminders, with estimated completion of data collection by 11/30/21.

Implications: Nursing students currently being educated will be the nurse professionals who will be delivering care to populations that are very likely to be exposed to increasing health threats from a changing climate. An example of this is the growing recurrence of wildfire smoke throughout many locations in the West for extended periods of time in the summer months. Nurses armed with knowledge can assist clients to make informed decisions about how best to remain healthy in the face of rising temperatures, impaired air quality, and diseases such as West Nile virus that are intruding into more northern latitudes as the vector habitat changes.

An Interdisciplinary Planetary Health and Wildfire Smoke Research Collaboration

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Purpose/Aims: To describe how research can bridge paleoscience and nursing to address planetary health, specifically focusing on health inequities and the historical context of recent/modern wildfire smoke plumes.

Rationale/Background: Humans and natural systems are increasingly threatened by global warming, land use degradation, and changing fire regimes. Planetary health is a cross-disciplinary movement to address this global threat with a perspective that exploitation of species or natural systems anywhere is damaging to our overall planet's health. Uncontrolled large wildfires directly generate harmful pollution and irreversible changes of natural systems, thereby further accelerating climate change and harming human health. Cross-disciplinary, collaborative research with a planetary health perspective can address health impacts experienced due to wildfires and subsequent health system burdens.

Brief Description of the Undertaking/Best Practice: Collaborators initially needed to establish shared language to develop the team. The team identified that common terms, such as 'climate change' are defined differently within disciplines and a shared term was needed which included understanding each disciplines' perspective. To establish that the collaboration was mutually beneficial, the team defined shared research goals and shared/diverging aspects of the relevance of the research topic, and identified how the collaboration fit within each persons' broader research and career objective. Individual flexibility in data accessibility, data analysis and presentation, communication, and manuscript development and structure was essential to sustaining the collaboration.

Assessment of Finding/Outcomes Achieved: The collaboration led to an exploratory study to understand how climate change and extreme weather events, such as wildfires impact Lyft/Uber drivers and their perceived role in contributing to climate change. This project led to a post-hoc analysis of views on the intersection of climate change and pandemics. Our research scope is further narrowed to wildfire smoke plumes and its health impact, with an interest in bridging historical context from wildfires and associated smoke plumes and its implications to prepare for future health impacts.

Conclusion: By understanding the historical context of wildfire smoke plumes from a paleoscience perspective, nurses and other healthcare professionals can address current health inequities experienced from wildfires and improve future planetary health.

Global Health in India: Lessons Learned

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Purpose/Aims: To inform fellow nurse researchers and field workers of important lessons learned while completing a university-sponsored Global Health Fellowship in partnership with a Non- Governmental Organization (NGO) in India.

Rationale/Background: Global health is a rewarding and fruitful work that comes with challenges. This author was the first Global Health Fellow from an American university nursing school to work alongside a locally based NGO in Southern India. Our intent was to design and incorporate culturally sensitive curricula to teach Community Mental Health Care Workers (Nalam workers) about mental health and nursing basics.

Brief Description of the Undertaking/Best Practice: "The Banyan" is an NGO that delivers care to women with mental health issues in India, a traditionally marginalized group. The Nalam workers are caseworkers. The project goal was to incorporate nursing basics into a standardized curriculum. We created a comprehensive curriculum focused on teaching Nalam workers to function within the organization and provide nursing care in a rural setting. Based on past global health experience and using Leininger's Theory of Transcultural nursing, outsiders such as this nursing Fellow, are not effective if they believe they can enter an organization and outline initiatives. Outsiders must first join with the client, who in this case are The Banyan's own clinician leaders, to incorporate topics. Together, we created unique curricula that could be used to teach the Nalam workers the basics of nursing care while also eradicating stigma towards those with mental health and physical needs *(e.g., understanding a person with depression may have self-care deficits and is subject to lice, versus a personal failing, etc.).*

Assessment of Findings/Outcomes Achieved: Curriculum and teaching modules were delivered using a train the trainer session. Nalam workers provided feedback about the learning activity, ease of understanding, and level of engagement.

Results: This experience yielded these recommendations: 1) field workers/researcher should choose mentors that are content and global health experts. This can be two separate mentors if the sending university/organization does not have one singular mentor who fits the criteria; 2) be aware of local and international laws and what your visa allows and prohibits (e.g. the India visa allowed for train the trainer sessions but not direct teaching of the workers); 3) if feasible, use a translator not associated with the NGO who is comfortable with the local language; 4) take pictures or keep personal copies of all written communication, especially those written in the local language which can be translated and checked for accuracy later; and 5) conduct regular check-ins to ensure curriculum is applied after field work ends, keeping in mind that in-person meetings are more productive than virtual meetings.

Conclusion: To make gains as a global health researcher, nurse scientists must start working in the field. To ensure a productive field assignment, it is best to come prepared and be aware of major obstacles prior to starting the work while partnering with local experts. Flexibility in becoming part of the community is a valuable lesson learned based on this personal experience in India.

Measuring Allostatic Load: A Systematic Review of Reviews and Database Inventory

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Purpose: The purpose of this study was to systematically review and summarize biomarkers used in the measurement of allostatic load. Specifically, this study aimed to identify commonly used biomarkers, compare metrics and measurement approaches, and develop a comprehensive inventory of public databases that can be used for allostatic load measurement.

Background: The concept of allostatic load as an indicator of chronic exposure to stress was first articulated in 1993, leading to the longitudinal MacArthur Successful Aging Study (1988-1996). From this seminal work, an initial battery of 10 biomarkers was presented as indicators of overall stress adaptation (allostatic load) and predictors of all-cause mortality. This initial battery comprised of four primary mediators and six secondary mediators. Primary mediators represent the biochemical changes in the neuroendocrine system as a result of triggering the stress response. Secondary mediators represent changes to the cardiovascular, immune, and metabolic systems as a result to the stress response.

Methods: Medline, CINAHL, and PsychINFO databases were searched using the terms “allostatic load” (in article title or abstract) for peer-reviewed systematic reviews, meta-analyses, or scoping reviews published in English between 2003 and 2021. Search results were imported into Covidence™, a software program for systematic reviews, where they were screened for inclusion criteria. Article full text was reviewed for articles that met inclusion criteria. The following information was extracted for summary analysis from articles that passed the screening and review stages: databases used to source data, biomarkers utilized to measure allostatic load, biomarker measurement approaches. All study procedures adhered to the PRISMA 2020 Statement Checklist.

Results: The initial search returned 571 articles (including 72 duplicates). Of these, 17 systematic reviews (231 studies) published 1997-2020 were included. Most studies used allostatic load biomarkers from the allostatic load battery described above. Cardiovascular biomarkers most frequently used included systolic blood pressure (SBP), diastolic blood pressure (DBP), high-density lipoprotein cholesterol (HDL), and total cholesterol (TC). Metabolic indicators included glycosylated hemoglobin (A1C), body mass index (BMI) and hip-to-waist ratio (HWR). Both CRP and Albumin were used to represent immune secondary mediators. Serum dehydroepiandrosterone (DHEA), urinary epinephrine, and norepinephrine were used to measure neuroendocrine response and were part of the original primary mediators identified. A measure that was not part of the original battery, heart rate variability (HRV), was used in many studies reviewed to represent neuroendocrine response.

Public databases used in allostatic load research included National Health and Nutrition Examination Survey (NHANES), Midlife in the United States Survey (MIDUS), and National Social Life, Health and Aging Project (NSHAP).

Implications for Translation to Practice/Further Research/Policy: This systematic review of reviews summarizes the current state of the science for allostatic load measurement, including the accepted practices of how allostatic load is measured and utilized in research. The comprehensive inventory of public databases that include commonly used biomarkers will facilitate future research in allostatic load.

Levels of Apprehension of Contracting COVID-19 Among Healthcare Workers

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Purpose: Assess the level of apprehension for contracting COVID-19 among healthcare workers during the pandemic versus after the release of the COVID-19 vaccine.

Background: In March 2020, COVID-19 rapidly spread worldwide, prompting the World Health Organization (WHO) to declare it a global pandemic (Wang et al., 2020). Healthcare workers (HCWs) found themselves in the frontline caring for those affected by the virus (Wang et al., 2020). The sudden outbreak caused mental stress on HCWs as they faced unprecedented work pressure, feared contracting the virus, and exposing their family members (Li et al., 2020; Wang et al., 2020). Although there are many more factors influencing HCWs' apprehension of COVID-19, recent studies suggest that they experienced an increased level of anxiety and depression during the pandemic, significantly impacting their mental health and livelihoods (Li et al., 2020). Vaccination effectively prevents infectious diseases and reduces mortality rates; it could be a viable option for HCWs to protect themselves against COVID-19, potentially decreasing apprehension levels of contracting the virus (Kwok et al., 2021).

Methodology: A quantitative exploratory design was utilized. A researcher-developed, 20-question survey was shared via social media platforms and e-mail to HCWs in various settings.

Results: A total of 108 HCWs participated in the survey. 63% were 25-40, and 27% were 45-65. Close to 80% were females. 71% are registered nurses. Prior to the pandemic starting, 51% of the participants reported feeling mild apprehension, 29% reported having no apprehension. When the pandemic began in March, 20% participants felt mild, 57% moderate, and 19% severe apprehension of contracting the virus. After the release of the COVID-19 vaccine, 63% participants felt mild, and 15% felt no apprehension. When the pandemic began, 30% of participants reported always, 35% often, and 32% sometimes felt apprehensive of contracting COVID-19. After the release of the vaccine, 21% often, 63% sometimes and 10% never felt apprehensive of contracting COVID-19. When having to care for COVID-19 patients during the pandemic, 25% participants felt mild, 57% moderate, 16% severe, in apprehension of COVID-19. After the release of the vaccine, 64% participants felt mild, 20% moderate, and 16% felt no apprehension. A total of 77% participants had gotten the vaccine, 15% were planning to receive it, and 8% reported having no desire to receive it. Of the participants vaccinated, 68% had mild, 14% moderate, and 17% felt no apprehension. Of the participants who were vaccinated and had been exposed and/or tested positive, 52% reported a reduction in apprehension for contracting the virus, 27% had no reduction, and 21% had yet to receive the vaccine.

Implications: The research was conducted to assess whether the level of apprehension for contracting COVID-19 was reduced after the release of the vaccine. There was a 43% reduction in mild and 36% reduction in moderate apprehension levels, after the release of the vaccine. Vaccinations play a crucial role in decreasing levels of apprehension. Education and awareness for vaccinations should be prioritized. Especially among HCWs, to aid in relief of mental distress and apprehension.

Stress Coping Among Frontline Healthcare Workers during the COVID-19 Pandemic

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Purpose: The purpose of this research is to evaluate the stress levels and coping mechanisms used for stress among frontline healthcare workers during the COVID-19 pandemic.

Background: In December 2019, a new virus called SARS-COV-2 (COVID-19) was discovered that led to a pandemic that caused major cities to shut down and hospitals to become full and heavily impacted (Coffré & Leví Aguirre, 2020). The increased number of COVID-19 patients has posed a challenge for hospitals to address the surge and has greatly impacted the physical and mental health of frontline healthcare workers (Nie et al., 2020). It was found that those that experience stress have various ways to cope such as planful problem-solving, positive reappraisal, seeking social support, and escape-avoidance behaviors (Isa et al., 2019). Primary care providers are willing to serve the frontlines of the COVID-19 pandemic even though they believe to be at a high risk themselves (Lau et al., 2021).

Methodology: This research used a descriptive, quantitative methodology by means of survey. Participants were invited through various social media platforms for participation.

Results: Ninety-two participants completed the survey; the majority are between 18-39 years old; 86% of the participants being female. Ninety-two percent were nurses, with most having five years or less experience. During a work week, over 50% of participants felt stressed 3-4 days per week and 35% felt it 1-2 days per week. Factors that caused participants stress at work included long work hours, not enough staff, not enough PPE, increased patient acuity, and insufficient supplies to care for patients. Of the participants, 93% reported that the COVID-19 pandemic increased their level of stress and 86% of the participants were worried about transmitting the virus to their families. Seventy-seven percent of the participants were stressed between professional duty and one's safety, and 66% felt that family, friends, and neighbors avoided contact. Fifty-two percent of the participants believed the COVID-19 vaccine helped decrease stress and anxiety. Coping mechanisms utilized for stress included watching television, social media, hiking, weightlifting, and meditating. Forty-six percent reported engaging in activities to decrease stress and anxiety 1-2 days per week and 37% with 3-4 days per week. After performing activities to decrease stress and anxiety, 59% reported minimally stressed, 29% reported somewhat still stressed, and 7% reported no stress. Lastly, 68% believed they had available resources to cope with stress which included online support groups (21%), counseling services (33%), religious support groups (20%), and family or friends (25%).

Implications: This research was conducted to evaluate the stress levels and coping mechanisms used among frontline healthcare workers during the COVID-19 pandemic. Over 93% of felt an increased stress level due to the COVID-19 pandemic. The top factors that increased stress were not enough staffing and increased patient acuity. These results imply that inappropriate staffing and increased patient acuity causes increased stress levels among healthcare workers. Overall, these results reveal the need for utilization of positive coping mechanisms and counseling services to healthcare staff.

Comparing Stress and Anxiety of Parents and Non-Parents during COVID-19

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Purpose: Evaluate self-perceived anxiety and stress (SPAS) levels during the COVID-19 pandemic among parents with school-age children at home and non-parents.
Background: Coronavirus pandemic (COVID-19), a highly communicable viral respiratory disease, is responsible for the pandemic that has impacted the daily lives of everyone (Alamri et al., 2020). Parents of young children have had unique lifestyle changes due to working from home, educating children, entertaining children, and caring for family (Lee et al., 2021; Wu et al., 2020). Globally, mental health has been negatively affected due to COVID-19 (Mousavi et al., 2020; Wang et al., 2020). Parents have experienced burnout, major depressive symptoms, and anxiety, which negatively affects their familial relationships. (Kubb & Foran, 2020; Lee et al., 2021; Mikolajczak & Roskam, 2018).
Methodology: A quantitative, cross-sectional design was utilized surveying SPAS. A 20-part, researcher developed questionnaire via Qualtrics® was sent as a web-link via email and social media. Data was collected and analyzed by the researchers.
Results: A total of 169 surveys were completed. 96 reported no children, 73 reported having children. More than 75% of the participants were female, 64.84% were married, 37.91% were college graduates with a 4-year degree, and 58.24% were employed. A majority of parents had one child, and the majority of children attended school from home during COVID-19. Females scored higher on the SPAS-9 assessment, indicating increased SPAS when compared to males ($P < 0.05$). There was a significant difference among age groups with regard to SPAS ($P < 0.005$), employed respondents were significantly less stressed compared to unemployed respondents ($P < 0.05$), there was no significant difference among ethnicities ($P = 0.65$), and it was found that parents are not significantly more anxious or stressed compared to non-parents ($P = 0.4$). The number of children did not play a role in SPAS among parents ($P = 0.6$), there was no significant difference among single versus joint parents ($P = 0.33$), and there was no significant difference between the parents of children attending in-person learning versus distance-learning ($P = 0.11$).
Nursing Implications: Awareness of stress and anxiety levels during this global pandemic is valuable to healthcare providers in order to effectively understand the mental health repercussions from the lifestyle changes associated with COVID-19. Understanding the effects COVID-19 has had on the general population could assist different agencies to create policies and programs for post-pandemic economic and social rehabilitation. Further research that can be done includes studying availability of mental health resources to different populations, for example women, migrants, or low-income, specifically researching why women reported higher SPAS levels during COVID-19, and studying unintentional transference of stress from parent to child.

Healthcare Students' Preference for News Sources and COVID-19 Pandemic

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Background: The amount of information available on the Internet and social media can rapidly become overwhelming. The COVID-19 pandemic has highlighted the relevance of information sources and reliability and the function of these sites in propagating misinformation. The steady stream from these sites can cause stress and anxiety in everyone with internet access, including students in healthcare professions.

Purpose: To describe the information sources and frequency of use by nursing, medicine, and health profession students and compare users of reliable and less credible news sources on stressors, stress relievers, safety, and preventative actions, concerns, and attitudes toward the COVID-19.

Methods: One-hundred twenty-three students from nursing (38%), medicine (33%), and health prof (28%) took part in surveys that included demographic questions, disaster preparedness training, knowledge of the COVID-19 virus and pandemic, and safety and prevention practices like effective use of personal protective equipment, social distancing, hand hygiene, and surface cleaning. Students were mostly female (81%), white (59%), and aged 21-30 (72%).

Results: Students who relied on credible news sources scored higher on knowledge of the COVID-19 condition. In addition, students who used credible news sources reported less stress than those who did not.

Conclusion: The findings underscore the critical need for students to exercise caution regarding untrustworthy news sources. Not only were informed students less stressed, but they can also provide more support for initiating proper safety measures in the communities they serve.

Keywords: Interprofessional Health Care Students; COVID-19 pandemic; Misinformation, Reliable news sources Information source, Student stress

Exploration of COVID-19 Related Health Anxiety on Quality of Life of Nursing Students

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Purposes/Aims: To explore the impact of COVID-19-related Health Anxiety on the Quality of Life of Nursing students.

Background: Health anxiety is the term that refers to the worry about one's health, including contracting a new infection. In its most severe form, it can turn into hypochondriasis, where the student suspects he or she has contracted every illness studied. Health anxiety is common among students studying health conditions; however, we know little about how the experience of health anxiety changes during a global pandemic. In the general population, the fear of infection and the social isolation caused by the SARS-CoV-2 pandemic increased anxiety and had a negative effect on mental health. We hypothesized that nursing students, already at risk for health anxiety, would have increased levels of anxiety and lower quality of life scores during the pandemic. Results from this study may allow for a tailored approach to protecting the mental health of nursing students.

Methods: We adapted the Health Anxiety Inventory tested and validated by Salkovskis and colleagues (2006) and the Health-Related Quality of Life Questionnaire from the Centers for Disease Control and Prevention (2018). The final questionnaire consisted of 15 items (7 to estimate health anxiety and 8 to assess quality of life). Health anxiety questions included 4-point Likert-scale responses with choice options ranging from never to always, with higher scores indicating higher levels of health anxiety (possible range 7-28). Quality of life questions were a 5-point Likert-scale with choice options ranging from poor to excellent, with higher scores indicating better quality of life (possible range 8-40). A list-serve of nursing students enrolled in a medium-sized public university was generated from university records. The survey was sent electronically by a third party. Potential participants were invited to complete the survey and students were told that continuation of the survey indicated their consent. We calculated descriptive statistics and used linear regression to estimate associations between variables.

Results: We received 153 survey responses (25% response rate). The mean health anxiety score was 13.02 (standard deviation 3.47); the mean quality of life score was 21.57 (standard deviation 6.07). In unadjusted models, health anxiety is associated with a lower quality of life score (β -0.32, $p<0.01$). Perceived likelihood of contracting COVID-19 was associated with higher levels of health anxiety (β 2.36, $p<0.01$).

Implications for Translation to Practice: Among nursing students at a mid-sized public university, health anxiety results in decreased quality of life. Interventions to reduce health anxiety in students may improve quality of life. Due to the increase in health anxiety scores with perceived fear of contracting COVID-19 efforts to improve vaccination rates may help students manage their anxiety. Nursing professors might consider ways to reduce student anxiety to improve quality of life.

Funding: Montana INBRE is part of the Institutional Development Award (IDeA) program from the National Institute of General Medical Sciences division of the NIH under grant number P20GM103474.

A Grounded Theory of COVID-19 Health Outcomes

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Purposes: To establish a grounded theory that explains the racial/ethnic disparities in the novel coronavirus disease 2019 (COVID-19) outcomes, with an emphasis on comorbidities.

Background: The current COVID-19 pandemic has caused unprecedented morbidity and mortality. The impact of the COVID-19 pandemic has not affected all populations or communities in the U.S. equally. Racial/ethnic disparities have been documented in multiple geographic areas, with African American, Hispanic/Latino, and other minority populations experiencing higher rates of infection as well as mortality.

Process Used: Using a grounded theory approach, data were collected by searching PubMed and PsycINFO to retrieve relevant studies or systematic reviews with full texts in English. To identify major themes and generate a middle-range theory, a four-step coding procedure was applied using Nvivo 12. To enhance the rigor of the data analysis, the technique of constant comparison was used.

Logic Linking the Theory: Three major themes were identified, including comorbidities, socio-economics, and treatments. All these three factors interact together to influence the COVID patients' health outcomes through underlying etiological mechanisms.

Conclusion: The middle-range theory developed in this study can serve as a framework to direct future nursing research and practice for COVID-19 health outcomes. The impact of racial/ethnic disparities in COVID-19 outcomes should not be separated from the bigger picture of the socio-economic context.

Impact of COVID-19 Pandemic on Reported Incidents of Workplace Violence in Hospitals

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Purpose: To determine whether the frequency and severity of California healthcare workers' reported incidents of workplace violence (WV) changed during the first few months of the COVID-19 pandemic.

Background: WV towards healthcare workers is a serious and growing concern. Reports have indicated that WV towards healthcare staff has increased during the coronavirus pandemic due to added stressors, but there is little research measuring these perceived changes. Underreporting of WV through official channels is known to be a pervasive issue, and California's unique incident reporting system offers a new approach to measuring its frequency.

Methods: Data reported to the California Occupational Safety and Health Administration (CalOSHA) from July 1, 2017 – June 30, 2020 through the Workplace Violent Incident Reporting System (WVIRS) for Hospitals were analyzed. All California hospitals are required to report incidents where force was used against a worker within 72 hours through a web-based portal. The mean reported incidents per day, both for incidents involving injury to the worker and those not causing an injury, was calculated for each type of hospital unit both before and after April 1, 2020, a date which approximates initial public health restrictions. Each type of hospital unit was treated as a pair with a "pre-COVID" and "post-COVID" daily mean. Paired, 2-tailed t-tests were conducted to assess the difference between mean daily incidents.

Results: A total of 25,718 incidents were reported from July 1, 2017 – March 31, 2020, and 2,213 incidents were reported from April 1, 2020 – June 30, 2020. 413 hospitals submitted reports. The resulting means were 26 incidents per day during the "pre-COVID" period and 24 incidents per day in the "post-COVID" reporting period. Hospital locations were grouped into categories: behavioral health, emergency department, inpatient units, surgery, ambulatory, and non-patient care. The areas with the highest reported mean incidents per day were behavioral health (4 incidents/day), emergency department (7 incidents/day), and inpatient units (10 incidents/day). For incidents involving a physical injury, behavioral health and emergency department units each reported a mean of 2 incidents/day, while inpatient units reported 3 incidents/day. There were no significant differences in mean daily reports of WV incidents when comparing "pre-COVID" to "post-COVID" time periods, both for total incidents and those involving physical injury.

Implications: While reported WV incidents did not change during the first three months of the pandemic, it is difficult to conclude that this reflects the true experience of California's healthcare workers. In the early days of the pandemic, it is possible that WV incident reporting was significantly de-prioritized for hospitals throughout California, which may compromise WVIRS accuracy. At the same time, mean daily reported incidents dropped only slightly, indicating that reporting did not altogether stop in the context of significant new stressors. WVIRS provides a new source of data and may help measure the effects of forthcoming new WV protections. Additional research into reporting practices can help determine how useful this tool will be and better understand if it suffers from the same challenges as other sources of official WV data.

Sleep-Related Impairment in Nurses Working 12-Hour Day or Night Shift during COVID-19

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Purpose: To describe sleep-related impairment in a group of acute care Registered Nurses (RNs) working full-time, 12-hour day or night shifts during the COVID-19 pandemic.
Background: Nurses working in the acute care setting during the COVID-19 pandemic have reported a high burden of fatigue. High fatigue has been associated with numerous adverse outcomes, including increased absence from work, poorer nursing performance, and worse mental health. Sleep-related impairment (SRI), a measurement of alertness and overall function when awake over the last seven days, is a critical measure for working clinicians as higher SRI is related to increased likelihood of making a significant patient error. Yet, it is unclear which work and sleep-related factors are associated with SRI among nurses working full-time, 12-hour shifts in the hospital setting during the current pandemic.
Methods: Nurses working full-time, 12-hour day or night shifts across four states were invited to participate in a pilot study measuring lifestyle habits for ten days. This secondary analysis presents cross-sectional findings on relationships between certain factors (sleep medication use, caffeine consumption, shift type, morningness/eveningness mismatch, length of breaks, sleep disturbance) and sleep-related impairment. SRI and sleep disturbance (calculating how refreshing sleep is perceived to be in the past week) were measured using the Patient Reported Outcomes Measurement Systems (PROMIS) which normalizes scores against the general population using a t-score calculation. A cut-off t-score of 50 or higher indicates more of the symptom compared to the general population.
Results: Data from a convenience sample of fifty-seven nurses (n=10 males, 17.5%) were analyzed. Of these, 37 (65%) reported a PROMIS SRI t-score greater than 50 (mean=52.6±6.4). Nurses with higher SRI's were significantly more likely to be younger than 40 years old (84% versus 60%, $p<0.05$) compared to those with low SRI. While not statistically significant, nurses with high SRI were more likely to work night shift (46% versus 30%), more likely to report using a sleep medication (38% versus 30%), more likely to report a PROMIS sleep disturbance t-score above 50 (59% versus 35%) and less likely to report regular caffeine consumption (84% versus 90%). No differences were noted between nurses based on SRI scores for: number of hours of sleep each night, average number of minutes spent on break during each shift, morningness/eveningness mismatch, or body mass index.
Implications and Further Research: In our sample, we report a high prevalence of SRI, although the pilot sample size was inadequately powered ($\beta<0.4$) to detect group differences. Our study presents trends that nurses with high SRI may: be more likely work night shift, report higher sleep disturbance compared to the general population, use sleep medication more, and rely on caffeine less than peers who report lower SRI. Future research studies with adequate sample sizes are needed to confirm relationships and to test targeted interventions to alleviate SRI among nurses providing full-time, direct patient care during 12-hour shifts.

Funding: Providence Health Care Foundation and Selinger Shone Foundation

The Relationship between Emotional Intelligence and Moral Distress in NICU Nurses

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Purpose: The purpose of this study is to measure the relationship between emotional intelligence and moral distress in NICU nurses.

Background and Significance: Moral distress in nursing is defined as the various institutional and cultural constraints that may prevent nurses from choosing the morally correct option in a given situation. Moral distress is a common issue for healthcare providers, especially neonatal intensive care unit nurses during end-of-life patient care. This distress is most often linked to futile care, which are invasive patient interventions employed with the knowledge that recovery is not possible. Moral distress can lead to increased nurse stress, anxiety, burnout, and attrition from the profession. Another outcome of moral distress is avoidance behaviors which negatively affect patient outcomes. Previous research reports that higher emotional intelligence scores may temper the degree of moral distress, and thus some of the negative outcomes, experienced by nurses (Adams & Iseler, 2014; Lewis, 2019; Zhu et al., 2015). Emotional intelligence is comprised of self-awareness, self-regulation, social awareness and social skills. Emotional intelligence can be strengthened through interventions, if positively associated with moral distress and thus may be an avenue to improve patient care, decrease nurse stress, burnout, and attrition from the profession.

Methods: This study used a quantitative, descriptive design. An invitation to participate in this study was posted in online National Association of Neonatal Nurses (NANN) membership forums. In addition to demographic questions, The Moral Distress Scale-Revised (Adult Nurse Questionnaire) and the Schutte Self-Report Inventory (SSRI) on Emotional Intelligence were used to collect data on the two main outcomes of interest.

Results: The research sample was composed of 83 level III or IV NICU nurses and nurse practitioners. Aggregate total scores for participants' perceptions of their own EI and MD were considered moderate to moderately high. While there was no statistically significant relationship between aggregate SSRI and MDS-R scores ($p > 0.05$), there were significant negative correlations that emerged. With higher SSRI scores on the perception of emotion item "I am aware of the non-verbal messages I send to others", MDS-R scores decreased for "carry out the physician's orders for what [they] consider to be unnecessary tests and treatments" ($r_{(64)} = -.268$, $p < .05$), as well as "work with nurses or other healthcare providers who are not as competent as the patient care requires" ($r_{(64)} = -2.51$, $p < .05$). Additionally, there was a significant indirect relationship between "I easily recognize my emotions as I experience them" from the SSRI and "carry out the physician's orders for what [the] consider to be unnecessary tests and treatments" ($r_{(64)} = -2.95$, $p < .05$).

Implications for Practice & Research: Further research with larger sample sizes is recommended to evaluate the full relationship between EI and MD in NICU nurses. As development of EI is considered beneficial in many areas of practice, it is recommended that nurse managers implement interventions to foster EI in their staff.

A Sustainable Multifaceted Approach to Improve Incentive Spirometry Use

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Purpose: The purpose of this project was to create a sustainable, evidence-based plan to improve incentive spirometry (IS) adherence rates in an intensive care unit.

Background: Despite its advocation by healthcare personnel, several studies evaluating the effectiveness of IS compared to other methods of respiratory exercises – typically deep breathing exercises – found little to no difference in prevention of postoperative pulmonary complications, differences in arterial blood gas results, or differences in pulmonary function tests. The reason for this lack of effectiveness of IS likely stems from low adherence rates caused by patient and nurse forgetfulness, patients unable to access the device, or patients using the device ineffectively.

Description of Undertaking: Intervention development involved reviewing the literature for methods to successfully improve patient adherence and soliciting input from management expertise. The final model incorporated three interventions: a multidisciplinary approach where RNs, nurses' aides, and physical therapists all committed to help remind the patient to use their IS; involving patient family members to provide encouragement and support to patients using IS; and improving patient education strategies to verify patients use the device correctly. Data were collected pre- and post-interventions via chart and room audits to determine the number of patients with IS and the number of IS sessions patients received. The Mann-Whitney U test was used to determine changes between the pre- and post-intervention groups. Level of significance was assessed at 0.05, and all tests were two-tailed.

Findings: The interventions lead to a statistically significant improvement in the number of patients participating in IS from 22% to 61% ($p < 0.01$). The number of patients receiving the recommended number of IS sessions per day also increased significantly from 12% to 34% ($p < 0.01$). Because of this study, standards of care in the unit changed to now include the use of IS as part of RN head-to-toe assessments and nurses' aides' responsibilities. By following this pattern, and encouraging independent patient use with the support of family members, patients in the unit will perform IS at least eight times per day. Several nurses reported positive experiences in their patients' respiratory status as they increased IS usage and verbalized their intent to continue with the interventions.

Conclusions: This project highlights the power of patient-family engagement of self-care during hospitalization. Due to the critical nature of ICU patients, patient and family participation in self-care is often limited, but IS provides an opportunity for them to actively engage in promoting their recovery. The project also represents a positive first step in determining the effectiveness of IS in improving pulmonary outcomes and reducing respiratory complications. As IS adherence rates continue to progress, potential studies emerge to compare patient pulmonary function tests, arterial blood gases, and other respiratory measures before the interventions and afterwards. Thus, IS can conceivably become the evidence-based practice advocated for by so many healthcare personnel.

Hospital Acquired Pressure Injury Risk in Medical Intensive Care Patients with COVID19

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Purpose: The purpose of this study was to examine hospital acquired pressure injury (HAPrI) risk in the Medical Intensive Care Unit (MICU) patients with COVID-19. The specific aim was to identify independent risk factors for HAPrIs.

Background: HAPrIs, defined as injuries to the skin or underlying tissue as a result of pressure or pressure in combination with shear, occur in approximately 6% MICU patients at our hospital. HAPrIs are associated with longer length of hospitalization and increased morbidity and mortality. Risk factors for HAPrIs vary based on patient condition; however, little is known about risk factors for HAPrIs in MICU patients with COVID-19. It is possible that the unique physiology of COVID-19, including problems with oxygenation and perfusion and high severity of illness, confer a greater risk for HAPrIs.

Methods: Retrospective record review was used to identify MICU patients with COVID-19 in one MICU in the Western United States. Adult patients (aged >18) with a positive COVID-19 test who were admitted between March 2020 and April 2021 were included in the study. Patients with pressure injuries present on admission were included in the study because those patients are at risk for subsequent HAPrIs development. Patients with an MICU length of stay <48 hours were excluded from the study because HAPrIs take at least 48 hours to form. HAPrIs were defined according to the National Pressure Injury Advisory Panel definition, and all stages were included. Potential predictor variables included demographic factors, shock, Charleson comorbidity score, blood gas and laboratory values, surgical factors, vasopressor infusions, levels of sedation or agitation, Braden Scale scores, and nursing skin assessment data. Independent risk factors for subsequent HAPrIs formation were identified using logistic regression analysis.

Results: A total of 124 patients met the study inclusion criteria. Of those, 31 (25%) developed a HAPrI. In multivariable logistic regression analysis, independent risk factors for pressure injury were vasopressor infusion (OR= 3.25, 95% CI= 1.26-8.71, p=0.02), mechanical ventilation (OR=1.03, 95% CI=1.01-1.05, p=0.004), and elevated partial pressure of carbon dioxide (OR=4.73, 95% CI= 1.28-14.95, p=0.006). McFaddens pseudo-*R* square was 0.25, indicating good model fit, and the area under the Receiver Operating Characteristic curve was 0.72, indicating fair discrimination.

Implications for Translation to Practice: Compared to the baseline 6% HAPrI incidence in our MICU, the patients in our study diagnosed with COVID-19 were more than three times as likely to develop HAPrIs. Nurses may consider extending maximal preventive interventions to all MICU patients with COVID-19, and particular vigilance may be needed for those who undergo vasopressor infusion or mechanical ventilation, or who experience elevated levels of carbon dioxide ($PaCO_2$).

Fecal Incontinence Bags

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Purpose: This evidence-based practice initiative addresses finding a least invasive, nurse-driven interventions for patients with fecal incontinence. The clinical question was posed: Are fecal incontinence bags a safe, affordable alternative to rectal tubes for fecal management? Establishing a wider variety of interventions for fecal incontinence would allow nurses to provide safer, more individualized care across a variety of inpatient settings.

Background: Patients frequently experience fecal incontinence when they are critically ill. In the setting of the COVID-19 pandemic, ICU patients experience longer dwelling times on invasive lines, including rectal tubes (i.e., internal fecal management systems). Extended use of rectal tubes increases the risk for pressure ulcers and rectal bleeding. Without a less invasive option, nurses turn to rectal tubes as a first line intervention to reduce skin breakdown and hypoxic events despite the potential risks.

Methods: A review of literature was performed to determine feasible alternatives to internal fecal management systems leading to a roll-out implementing fecal incontinence bags in a COVID ICU at a Level 1 trauma center. The facility wound team was consulted for recommendations. Supplies were made available and initial training was provided via staff meetings and the Skin, Wound, and Tissue unit committee. Benchmarking measures were reviewed using a similar healthcare facility's established interventions. A video on fecal incontinence bag application was created as a resource for clinical staff.

Assessment of Findings: Literature review showed fecal incontinence bags were inexpensive, simple to apply, and applicable to patients a variety of settings. Fecal incontinence bags decreased the incidence of incontinence associated dermatitis. While the application of fecal incontinence bags did not replace appropriate skin care, fecal incontinence bags were a feasible and less invasive alternative.

Participating staff offered feedback after several months of implementation. Staff were more inclined to place fecal incontinence bags over rectal tubes because of its less invasive nature. Some challenges with initial application and maintenance was identified, including difficulty handling adhesive. Overall, staff frequently stated having more options was helpful in keeping improving fecal management and was easy to use.

Conclusion: Improving fecal incontinence management may reduce tissue breakdown and increase patient safety and experience. Offering more options to nursing staff empowers them to provide safer, more individualized care. Since this initiative was first rolled out, the hospital system is will expand the use of fecal incontinence bags across a wider service lines beyond critical care, including pediatric and acute care units. Fecal incontinence bag application should be made a part of every caregiver's clinical orientation and promoted as a nurse-driven measure.

A bowel management decision tree is currently being developed to support clinical judgement. Other relevant staff should also be educated to this new intervention, including physicians and licensed independent practitioners. Future research and evaluation should be performed to establish appropriate maintenance and optimize the process.

Best Practices for a Healthy Work Environment: Perspectives of Critical-Care Nurses

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Background: Healthy nurse work environments (HWEs) are vital for high-quality patient care. Nurses who work in HWEs feel empowered, engaged, have healthy working relationships, and provide safe, quality patient care. The American Association of Critical-Care Nurses (AACN) identified six standards for HWEs and explored them quantitatively: skilled communication, true collaboration, effective decision-making, appropriate staffing, meaningful recognition, and authentic leadership (Ulrich et al., 2019). A positive relationship between the implementation of the six standards of a HWE and the health of critical-care nurse work environments was identified. The purpose of this study was to explore critical-care nurses' perceptions of HWE best practices and test their descriptions against the six established AACN-HWE standards.

Methods: This qualitative exploratory study represented data of critical-care nurses' written responses collected from a larger online survey during the pre-COVID-19 era (Ulrich et al., 2019). A subsample ($n = 3{,}324$) of a national sample of $N = 8{,}080$ AACN members described a work environment best practice in their unit/organization that others could use to improve their work environment. Inductive conventional content analysis identified emergent themes; deductive directed content analysis tested the dataset for consistency with the HWE standards and illustrated exemplars for each theme and subtheme.

Results: The most prevalent best practices for HWEs were related to staffing ($n = 755$) (corresponding to AACN-HWE Standard #4: appropriate staffing) which addressed the subthemes such as, resource nurse availability, ensuring relief for breaks and lunches, adequate training for new-hire nurses, and over-hiring of nursing staff. Codes not aligning with the six HWE standards and their descriptions ($n = 506$) but co-occurring with staffing-related text revolved around adequate work supplies and equipment, functional equipment, appropriate workspace, and flexibility of work schedule.

Conclusions: While nurses identified intentional organizational efforts to maximize staffing options and improve the work environment, this analysis also identified best practices that did not align directly with the six HWE standards such as, having adequate supplies, equipment, and workspace. These best practices influence nurses' workload and ability to cope with the demands of work. Work environments that lack these essential best practices have already struggled to retain their nursing workforce before the onset of the COVID-19 pandemic.

Implications: Since the COVID-19 pandemic has increased the shortage of well-trained nurses and amplified the staffing crisis, hospital administrators must take measures to assure that the need for more work supplies and functional equipment do not pose an additional strain on the already fragile staffing situation.

Heath Beliefs Toward Lung Cancer Screening Among Chinese American High-Risk Smokers

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Aims: This study aims to explore beliefs and attitudes toward lung cancer screening with low dose computed tomography among Chinese American high-risk smokers.

Background: The prevalence of smoking and lung cancer is high among Chinese Americans; however, the uptake rate of lung cancer screening is relatively low among this population. Lung cancer screening behavior is closely related to health beliefs about lung cancer screening.

Methods: Guided by the Health Belief Model, semi-structured individual interviews were conducted with Chinese American high-risk smokers via phone. Additional questionnaires on demographic information as well as history of cigarette smoking and lung cancer screening were collected via email or phone before the interview, depending on participants' preferences. Content analysis was used to extract meaningful and significant themes within the dataset. Constant comparison analysis and process coding were used to categorize and code data.

Results: Data saturation was reached after interviewing nine participants. Chinese American high-risk smokers perceived a low susceptibility to lung cancer, since they believed various protective factors against lung cancer (e.g., exercising, having a healthy diet, etc.) reduced their risk of getting lung cancer. All the participants perceived a high severity of lung cancer. They acknowledged that lung cancer would have a huge impact on their life. Perceived benefits of lung cancer screening were accurate in most aspects although minor confusions were still observed among this population. Perceived barriers varied on participants', physicians', and institutional levels. High-risk Chinese American smokers had little confidence toward lung cancer screening. Cues to action for them to screen for lung cancer included recommendations from health care providers, support from family members and friends, and information shared on Chinese-based social media.

Implications for Translation to Practice: Misconceptions and barriers to screening for lung cancer existed widely among Chinese American high-risk smokers. Intervention programs and clinical practices should be implemented to increase lung cancer screening rates among this population. Interventions for the population should be designed to (1) promote smoking cessation and lung cancer screening among Chinese Americans together through shared decision-making conversations; (2) provide mental health support s to counter the effects of fatalism and negative emotions among this population; and (3) provide support for high-risk Chinese American smokers' significant others and their health care providers.

Funding: Research grants from American Cancer Society, Sigma Theta Tau

Knowledge, Attitudes about HPV Vaccination Among Chinese International Students

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Purpose: Guided by the Health Belief Model developed by Rosenstock et al. in 1974, this study aimed to examine sociodemographic characteristics, Human papillomavirus (HPV)-related knowledge, attitudes, and facilitators and barriers of receiving vaccine between vaccinated and unvaccinated Chinese international students.

Background: HPV is the most common sexually transmitted infestation (STI) globally. It is responsible for 91% of cervical cancer (CDC, 2019), the fourth most common cancer among women (World Health Organization [WHO], 2018). In China, HPV infection accounts for 69.1% of invasive cervical cancer. College students have been identified as one of the populations with the highest HPV infection rate (Revzina & Diclemente, 2005). Moreover, studies have shown the disparities of HPV knowledge between international students and U.S. students. Karki (2020) found that U.S. students are more likely to have heard about HPV, be more aware of the HPV vaccine, and have lower perceived barriers than international students.

Methods: The sample included 110 Chinese international students who enrolled in a public university in the U.S. were recruited through flyers distributed by a Chinese students association. Students who (1) were ethnic Chinese, (2) were 18 years or older, and (3) could write and read in both Chinese and English were invited to participate in an online survey administered on REDCap which included questions about sociodemographic characteristics (e.g., age, sex, major, etc.), HPV-related knowledge, education, attitudes, facilitators and barriers for vaccination, vaccine acceptance and uptake. It took about 10-15 minutes to complete the online survey; each student received a $10 e-gift card sent to his/her non-University email. We will conduct univariate, bivariate, and multiple linear regression analyses to address study aims.

Results: We have received IRB approval and have finished collecting data. The study analysis will be completed by February 2022.

Implications: Findings of this study will help understand the factors relevant to Chinese international students' intention to get vaccinated against HPV and prevent its related cancers. The findings will also inform how to best provide culturally, linguistically, and contextually appropriate education to promote HPV vaccination among Chinese international students studying in the U.S.

Using Traditional Ecological Knowledge in a Collaborative Food Study

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Purpose: Collaborative research between scientists and local community members is often required to collect needed study samples. This is particularly true in American Indian communities where local knowledge and practices are integral to data collection, analysis, and dissemination. Traditional Ecological Knowledge (TEK) is knowledge gained by experience, observation, and the analysis of events transmitted among Indigenous community members over many generations. There is value in utilizing and applying TEK to environmental health studies.

Background: > 500 uranium (U) mines exist on Diné (Navajo) lands. This study collaborated with Diné tribal harvesters and leaders in New Mexico to examine the concentration levels of metal(loid)s in the primary food chain in a U mining impacted area. Key food chain items (sheep, crop, herbal tea plants), including soil, water, and sheep forage samples were collected and determined for several metal(loid)s including U (As, Cd, Cs, Mo, Pb, Se, Th, and V) utilizing ICP-MS.

Methods: The study was guided by a five-step methodological approach that included local Diné food harvesters incorporating Indigenous TEK and practices with Western science-based knowledge and practices. The methodology consisted of: 1) identifying goals and research questions, 2) designing the study according to Diné and scientific protocols, 3) determining respective collaborative roles during fieldwork, 4) implementing the fieldwork, and 5) analyzing and disseminating the findings.

Results: The collaborative work supported constructs of respectfulness, trust, k'é (Diné word for kinship), enhanced communication, and provided better understanding of contamination by researchers, community members, and leaders. It yielded collection of novel baseline data, collaborative analysis, dissemination of data, and provided realistic reassessment goals and recommendations for the future.

Conclusions: The methodology was highly applicable, feasible, and can be used as a model in similar community studies. The collaborative model will further benefit by incorporating important cultural value and knowledge. This will enhance the nursing research process, provides future avenues of research and identifies environmental policy needs. This study has the potential to identify areas of research and need for education about risk factors related to residing in and around contaminated sites. Outreach to augment prevention efforts, screening, education, intervention, and monitoring are recommended.

Funding: Funding. This research was funded by the National Institute of Nursing Research (NINR) of the National Institutes of Health (NIH), under Award Number F31NR013102, the NIH/NINR T32NR007077; the University of California, Los Angeles (UCLA), National Institute for Occupational Safety and Health (NIOSH) 2 T42 OH 8412-8, the 2012-13 UCLA Institute of American Cultures (IAC), and the 2011–2013 Navajo Nation Grant.

The PDCA Cycle to Address Mental Health Disparities for Hispanics in a Rural State

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Purpose: To describe the interprofessional use of the Plan-Do-Check-Act (PDCA) cycle in the identification of potential interventions designed to address poor mental health outcomes in a Hispanic community.
Background: The population of Hispanics in rural areas of the United States is growing rapidly, yet in new immigrant communities limitations in Spanish-speaking behavioral health providers is a barrier to accessing mental health services. Immigrants may fear that a health care provider will report them to immigration authorities, which can further delay necessary treatment. In a rural area, this can be compounded by a lack of diversity in the general population and a shortage of service providers. In the rural state in which this research was conducted, only 11% of the mental health needs of English speakers are met by providers, and the lack of Spanish-speaking providers is even more pronounced.
Methods: Working with a community advisory board, our interprofessional team of nursing and engineering researchers implemented a PDCA cycle using a community based participatory research approach. The Plan phase consisted of seven steps designed to identify the problem and its root causes. Using tools from industrial engineering, researchers and the community advisory board created flowsheets and diagrams to uncover the personal, environmental, political, and procedural contributors to poor mental health outcomes. This work led to the Do phase where we implemented a community health fair to screen for depression and anxiety in the Spanish-speaking community. In the Check phase, we analyzed the results of the PHQ-9 and GAD-7 screening, and participants who were identified as positive for depression or anxiety were provided information about a mental health intervention created by our team. The Act phase led to plans for regular implementation of the health fairs and a study designed to provide Spanish-language mental health services.
Results: The community health fair resulted in 50 mental health screenings. Of those, 21% screened positive for depression and 16% screened positive for anxiety. We made 16 referrals to the mental health intervention study.
Implications for Translation to Practice: Efforts aimed at addressing a health disparity require multi-faceted approaches and innovative collaborations. The success of our interprofessional work provides an example of how nursing and engineering can work together in community based participatory research. The PDCA cycle is a useful tool to uncover potential causes for a poor health outcome and to design and evaluate interventions targeted to mitigating those outcomes.

Funding: National Institute of General Medicine Sciences P20GM103474

Preparing Nurses to Care for Wounded Warriors: Impact of the Psych Sim Intervention

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Purpose: The purpose of this research was to examine the impact of the "Psych Sim: PTSD with Suicidal Ideation" educational intervention on undergraduate nursing student's attitudes toward Veterans, mental health nursing, and psychiatric mental health disorders.
Background: As a nation, we are experiencing an unprecedented crisis in the mental healthcare of Veterans. Between 2007 and 2017 the number of Veteran suicides doubled; the number of suicide attempts is unknown. The Covid-19 pandemic and recent events in Afghanistan have presented unique challenges for Veterans, further exacerbating mental health and substance abuse problems. These facts are especially meaningful in Montana, with 1 in 10 residents also being a Veteran. As the **majority** of Veterans seek **all** healthcare outside the Veteran's Health Administration, all nurses need to be educationally prepared to provide culturally competent nursing care. One facet of cultural competency when caring for Veterans is to be aware of the impact of military culture on healthcare decision making, healthcare seeking behaviors and therapeutic relationships. Key elements of the military culture are ceremony, etiquette, group cohesions, esprit-de-corp and a distinct professional ethos. In active duty, these are critical for troop cohesion but may quickly translate into an individual barrier to healthcare-seeking behaviors. The ability to for the nurse to form a therapeutic relationship is also influenced by biases held by the nurse toward Veterans and/or mental health disorders. Little is known about how well-prepared or culturally competent nurses are to provide emergent psychiatric nursing care for Veterans in rural and remote care settings. Further research is needed to better understand how to prepare nurse to provide culturally competent and relevant care for this at-risk group.
Sample and Setting: This community informed research project was conducted through a collaborative partnership between a Combat Veteran's Center and a College of Nursing (CoN). A convenience sample of nursing students currently participating in their psych/mental health nursing course were invited to participate. The unique structure of the CoN allowed for the intervention to be delivered on one campus with 4 other campuses serving as a control group.
Methods: A descriptive-comparative pre/post design was used to compare student's attitudes toward Veterans and psych mental health nursing. Students were recruited to participate (both intervention and control group) through the university's mail system. Prior to the intervention, baseline data was collected from the intervention and control group to explore their attitudes toward Veterans, psych mental health nursing, and mental health disorders. The intervention group participated in a multi-step educational intervention that included a didactic session specific to developing therapeutic relationships with Veterans and the influence of military culture on patient activation and engagement. Required Psych/Mental Health Nursing competencies were taught as part of the traditional curriculum. Intervention group students then participated in a simulated emergent nursing care experience for a Veteran experiencing PTSD with suicidal ideation. Students were recruited to participate (both intervention and control group) through the university's mail system. All data was collected online using Qualtrics.
Results: Data collection is complete and data analysis is in progress.

The Burden of Cancer: American Indian Survivors and Culture-Bound Response of Silence

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Purpose: The lives of cancer survivors and their families are greatly impacted by a cancer diagnosis. Research was undertaken to characterize the experiences of Southwest American Indians after receiving their cancer diagnosis.

Methods: A series of 13 Talking Circle focus groups were held with Southwest American Indian adult cancer survivors and their caregivers at five sites. Participants came from two urban sites and three rural reservation sites in Arizona. Sessions were audio-recorded, transcribe verbatim, and analyzed using Grounded Theory-based methods.

Results: Culture-bound responses to crisis and adversity were identified as facilitators or barriers to patient care. Traditional cleansing ceremonies, herbal medicines, talk therapy and often, silence were identified as responses to a cancer diagnosis. Reasons for silence was explained as, (1) not to burden the family, (2) to say the name of cancer can bring it forth, (3) the sigma of cancer which is considered a "new" disease, and (4) culture-bound beliefs leading to poor understanding of the cancer diagnosis.

Implications and Significance: Social support in times of need is valuable, and for American Indian cancer survivors, the family role is critical to providing supportive care, much of which entails numerous tasks central to the health care and treatment, such as transportation to providers and monitoring of medication and other activities. A history of intergenerational trauma among many American Indians has resulted in culture-bound responses such as keeping silence amid a cancer diagnosis, potentially delaying treatment and supportive care. This silence, keeping the cancer diagnosis to self and/or to caregiver/spouse, is harmful and adds to the burden of poverty, poor patient care, lack of follow up, spotty treatment, and low or non-support for cancer survivors. Education and awareness sessions with the community, tribal members, extended and nuclear family members can reduce the burden of cancer. Findings support nursing education and targeted outreach services for this unique community of cancer survivors.

Funding: Supported by grant from the National Cancer Institute #R01 CA115358, F Hodge PI

CROSS CULTURAL RESEARCH

Advanced Directives for Nursing Students, Their Parents and Grandparents.

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Background: End of life care can be costly and burdensome to families in addition to not always being consistent with patient preferences. Hispanics are less likely to develop an advanced directive (AD) as opposed to white non-Hispanics. Research is necessary to determine the reasoning behind limited AD use.
Purpose: Obtain a better understanding in end-of-life decisions between Hispanics and non-Hispanics to encourage proactive end-of-life planning to help carry out the wishes of the deceased, which may help decrease unnecessary burdens to the family and reduce overall medical costs.
Methods: This bi-institutional study is using a cross-sectional design to obtain data from undergraduate nursing students, their parents and grandparents with a total of 660 subjects between Schools of Nursing at Oregon Health and Science University (OHSU) and the University of Texas at El Paso (UTEP). The participants will fill out a one-time online survey including measures on end-of-life understanding and care preferences, AD planning, ethics, religion and spirituality, family functionality, and attitudes towards the health care system. Standard uni-variate statistics and logistic regression models will be used to analyze the data.
Results: Data collection is under way. Expected findings include differences in AD and end-of-life conversations among Hispanics in Texas and Oregon. This will include differences between rural and urban populations regarding AD and end-of-life planning as well as generational differences among students, parents and grandparents.
Implications for Translation to Practice/Further Research/Policy: Findings will be compared and disseminated in hopes that they will (a) be included in undergraduate nursing curricula to increase cultural awareness about AD use and end of life planning among Hispanics in Texas and Oregon; (b) lead to larger scale research studies and appropriate interventions to initiate AD and end of life planning among Hispanics.

Funding: HARP

Native American Nursing Students' Mentoring Expectations and Ideals

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Purpose/Aims: The aim of this study is to understand American Indian nursing students' expectations of the mentoring relationship.

Background: In Montana, American Indians comprise 6.6% of the population but less than 3% of the nursing workforce. The retention of American Indian students in nursing is critical to increasing the healthcare workforce in Montana. The Caring for Our Own Program (CO-OP) is a longstanding program that can be categorized as a workforce diversification program. HOPE Week 2021 was an orientation activity created and administered by faculty and staff. It has evolved into one of the many activities to support American Indian nursing students in the college program and is one of many key and influential support services offered through CO-OP. During HOPE Week 2021, CO-OP students engaged in culturally relevant community-building activities. Students listened to inspirational Native alumni and other speakers from the CON. CO-OP students and faculty mentors engaged in several reflective activities throughout the event aimed to explore beliefs about mentoring and effective communication.

American Indian nursing students' expectations about the mentoring relationship may help to understand students' needs better. Faculty mentors can learn to develop a better understanding of unmet needs, successes and to provide insight into the need for culturally attuned intervention strategies.

Approach/Methods: During the CO-OP's spring and fall HOPE Week 2021 we surveyed students (n = 77) and academic nurse mentors (n = 7). We delimited this study to the fall 2021 HOPE Week attendees. The CO-OP mentoring survey was administered to forty-six American Indian nursing students and seven faculty mentors, forty-two students and 7 faculty completed the survey at the meeting. The CO-OP survey measures peoples' mentoring expectations and beliefs about mentoring, academic advising, and cultural congruency in the college setting.

Implications: We share how the CO-OP mentoring relationship scale can be used by faculty mentors to foster their relationship with nursing students and to reflect on their beliefs and expectations of the relationship. We also identify the impactful practices that foster and support students' cultural integrity in nursing education. Nursing education disciplines and institutions will be better able to support Native American students by understanding the conditions, structures, and experiences that allow students to maintain their cultural identity and thrive in their new academic environments.

Discussion/Conclusions: In order to better understand the mentoring relationship, this study analyzes the perceptions of American Indian students towards the mentoring relationship and beliefs about the respective roles and responsibilities of each party. Our study is grounded in the four pillars of the Caring for Our Own program model (academic readiness, social connection, financial responsibilities, sense of place.) A review of professional expectations student perspectives can only aid in finding common ground and setting priorities. The relationship can only benefit from embracing students' diverse Indigenous worldviews. Future research efforts will look at how NA students' perceptions of the nurse mentor relationship longitudinally and center Indigenous perspectives.

Funding: This project is supported by the Health Resources and Services Administration (HRSA-18-012) of the U.S. Department of Health and Human Services (HHS) under UK1HP31719, Nursing Education, Practice, Quality, and Retention – Registered Nurses in Primary Care Program, as well as HRSA Nursing Workforce Diversification (D1942038) and HRSA Scholarships for Disadvantaged Students (T08HP39301).

DIABETES

Do Nurses Provide Comprehensive Diabetic Education?

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Purpose: The purpose of the study is to assess if nurses are providing comprehensive education to patients with type 2 diabetes mellitus on diet modification, exercise and medication adherence.
Background: According to the Centers for Disease Control and Prevention, nearly 34 million Americans have been diagnosed with Diabetes in the United States and is one of the top ten leading causes of death (CDC, 2020). Kern County's incidents of diabetes is 74% higher than the state's average (Kern County Health Department, 2021). Management and glycemic control through non-pharmacological measures, such as diet modification, can decrease complications that are related to Diabetes Type 2 (Lynch et al., 2019). Adults that live a healthy lifestyle by being physically active have lower chance of becoming insulin resistant, becoming type two diabetics, and having a compromised glucose tolerance (Kirwan et al., 2017). Education about exercise and diet that is provided to diabetic patients can increase nutritional knowledge regarding diet modification (Lynch EB et al., 2019).
Methodology: A quantitative exploratory design is used to exam if nurses provide comprehensive diabetic education to patients which includes medications, diet, exercise, and preventative measures to diabetic patients, utilizing a researcher developed a 20-question survey through Qualtrics was deployed in various social media platform and email invitation.
Results: A total of 47 nurses participated in the survey, 25% have an associate degree, 64% have a bachelor's degree, and 11% have a master's degree; 57% had 0-5 years of experience; 37%, provide patient education during discharge, 30% provide education when they give a diabetic medication, and 32% provide education when they encounter a diabetic patient. Close to 50% think their colleagues provide diabetic education during discharge, compared to 25% who believe that education is provided during medication administration and 27% during every diabetic patient encounter. Over 65% of nurses spend about ten minutes educating patients, while only 6% spend 20 minutes. The top barrier to providing diabetic education is time constraint. Over 95% of the nurses have knowledge about what foods are consistent with a diabetic diet. Close to half of nurses advise patients to exercise at least 3 days a week, but 9% never provide advice on patient exercise. Only 32% of nurses always educate patients regarding foods high in carbohydrates. Over 34% of nurses identified some barriers for why patients are non-compliant with medications. Over 72% educate patients on how often they should check their blood sugar; 64% of them answered that the workplace seldom provides diabetic education to the nurses.
Implication: This study was conducted to identify whether nurses providing comprehensive diabetic education to their patients. The responses indicated nurses are not unified in their approach to the patient education on diabetic care. There are rooms for improvement to get nurses educated on patient education methodology, to include foods, medications, exercises, and barriers to diabetic education.

Care Partner Attendance in Diabetes Education & Support Depends on Program Length

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Purposes/Aims: The purpose of this study is to examine the demographic differences and care partner attendance between two-time efficient diabetes self-management education and support (DSMES) interventions.

Rationale/Background: Diabetes requires individuals to self-manage multiple behaviors every day. DSMES is the cornerstone to understanding diabetes self-management behaviors. Two DSMES interventions were delivered at an academic medical center. The Diabetes One-Day Education and Care intervention (D1D) is an 8-hour intervention delivered by a multidisciplinary team, including group and individual sessions. The Intensive Diabetes Education and Support (IDEAS) intervention was a 4-hour group session with a shared medical visit. Due to the pandemic, IDEAS switched to a telehealth format (5 months in-person, 16 months telehealth). Telehealth technology troubleshooting was offered in advance for any participant who needed support. Both D1D and IDEAS attendees were encouraged to bring a care partner (family or friend) with them.

Methods: 213 participants attended the DID, and 131 attended IDEAS. Demographic data, including the inclusion of involved care partners at both interventions, were gathered. T-tests, Chi-square tests, and Fisher's exact tests were used to conduct a comparison between D1D and IDEAS and a comparison between in-person and telehealth IDEAS interventions.

Results: Most D1D and IDEAS intervention participants had type 2 diabetes (80% and 88%, respectively) and identified as White (85% and 91%, respectively). On average, participants in the IDEAS intervention were older (M=59.8±13) than those in the D1D intervention (M=56.4±16; $p<.05$). IDEAS participants were more likely to have a bachelor's degree or higher (56%) than D1D participants (39%, $p=.01$). There were no significant differences between interventions regarding diabetes type, diabetes duration, gender, race, ethnicity, income, marital status, living setting (rural, urban, suburban), or previous diabetes education.

Care partner attendance was significantly lower in the IDEAS intervention (26%) compared to D1D (47%; $p<.001$). When care partners attended, they were most often a spouse or domestic partner (72% IDEAS versus 61% D1D). We found no statistically significant differences between the in-person (N=37) and telehealth (N=92) versions of the IDEAS intervention on any demographic measures ($p>.05$). In-person care partner attendance trended higher in-person (35% versus 23%; $p=.23$).

Implications for Translation to Practice: The IDEAS intervention embodied older and more educated participants. Telehealth can support individuals who are older with appropriate technology checks. Both groups primarily identified their support care person as a spouse or domestic partner. However, the IDEAS intervention had lower care partner attendance. The in-person IDEAS intervention had trended for increased care partner participation and may not have been appropriately powered to detect statistically significant differences between groups. The COVID-19 pandemic could have influenced the stress levels of care partners being able to attend. Alternatively, low care partner attendance could relate to the shorter time frame and a perceived lower need for care partner support due to the shorter intervention. More research is needed to assess differences in care partner attendance based on duration and delivery mode.

Funding: Larry H. and Gail Miller Family Foundation

Improving Referral Rates of Hispanics with Type 2 Diabetes Mellitus to the Ideas Program

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Purpose: To share information about the Intensive Diabetes Education and Support Program (IDEAS) among Hispanics with type 2 diabetes mellitus (T2DM) to increase referrals and attendance at the Utah Diabetes and Endocrinology Center (UDEC) to facilitate self-management among Hispanic patients with T2DM.

Background: The incidence and prevalence of T2DM among Hispanics in the U.S. are higher than the national average. The risk for diabetes and issues with glycemic management result from disparities in social determinants of health within the Hispanic population. Low incomes, sparse resources, and decreased opportunities to receive education on diabetes management are sociocultural factors that also contribute to issues with glycemic management among Hispanic patients. The significant prevalence of T2DM among the burgeoning population underscores the importance of managing this chronic disease and emphasizes the need for improvements in patient education.

Description: The Donabedian Quality Framework conceptual model provided a structure for this quality improvement project. This framework separates quality improvement designs into structures, processes, and outcomes. The framework also provides a structure to evaluate the quality of care, guide the implementation of quality improvement projects, and determine potential influence of the improvement.

The methods used for this project included five steps. First, a needs assessment was done on the need for referrals to the IDEAS program. Second, an intervention was developed that consisted an educational PowerPoint for providers about the IDEAS program, an intake form for referral to IDEAS program, an IDEAS handout in English and Spanish for patients, and a clinical algorithm for providers and staff to screen Hispanic patients with T2DM. Third, the intervention was implemented. Fourth, referrals made and attendance of Hispanics with T2DM at the IDEAS program were evaluated and compared to data before the outreach intervention. Fifth, health team support for self-management of Hispanics with T2DM was assessed. Quantitative data was collected on the number of referrals and attendance of Hispanic patients with T2DM at the IDEAS program. Descriptive statistics were used to report team support for referring Hispanic patients with T2DM to the IDEAS program.

Assessment: Referrals and attendance of Hispanics with T2DM to the IDEAS program increased as a result of this quality improvement project and as well as team support for the IDEAS program.

Conclusion: Next steps include examining if increased attendance in the IDEAS program leads to a decrease in HbA1C levels for Hispanic patients with T2DM, especially those in the clinic whose levels were greater than nine percent. If this is the case, clinics with Hispanic patients with T2DM should designate a team member to supervise intake forms and the referral process. The educational PowerPoint and clinical algorithm should be given to new providers when joining the team. If this is not the case, the next step would be accessing existing barriers. Other clinics nationwide that treat Hispanics with T2DM should consider implementing this process of increasing referrals to diabetes self-management education-programs. Project outcomes can be applied to other community health centers to provide clinical support and enhance the management of T2DM among the Hispanic population.

Diabetes Prevention Program Completion Yields Additional Health Benefits

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Aim: Examine the impact of participation in the UA Cooperative Extension Diabetes Prevention Program (DPP) on ancillary health behaviors and health outcomes of attendees and household members (HHM), including differences in food intake, cooking/ shopping behaviors, sleep, physical activity, coping skills, healthcare-seeking behaviors, building a support system, decreasing alcohol intake, and smoking cessation. Outcomes to be measured include weight loss, self-reported blood sugar and cholesterol, joint pain, mood, stress and energy levels, less medication, self-confidence, and adherence to treatment regimens.
Rationale: Anecdotal evidence indicates that participation in the DPP yields benefits beyond the program's primary objectives of 5% weight loss and 150 minutes per week of physical activity. No studies have investigated which specific health behaviors occur due to participation in the DPP, other targeted outcomes, or the impact on HHM.
Conceptual Basis: The Health Belief Model (HBM) is consistent with the DPP. The model's components are the desire to avoid illness, achieve wellness, and believe that specific health actions will prevent or cure illness. The six concepts included in the HBM include perceived susceptibility, severity, benefits, barriers, the cue to action, and self-efficacy.
Background: Prediabetes is the reversible antecedent to Type 2 Diabetes Mellitus (T2DM), in which the body develops insulin resistance, causing high blood sugar levels. 1 in 3 Arizonan adults has prediabetes, and 90% of these individuals remain undiagnosed. Direct and indirect diabetes-related costs in Arizona are approximately $6.8 billion annually. The DPP is an evidence-based initiative proven to reduce the risk of developing T2DM by half by implementing lifestyle changes known to prevent progression to T2DM.
Methods: An 18-item Qualtrics survey was sent to all completers of the year-long DPP between 2019-2021. This study is being conducted over twelve months. Inclusion criteria included completion of the DPP. Exclusion criteria included those who did not complete the DPP. Data collection in progress. Preliminary results (n=15) showed that 86.6% of DPP participants and 13.3% of HHM lost weight. 60% of participants and 20% of HHM stated they were more physically active. Positive changes were also seen, including eating more fruit and vegetables and smaller portions, changes in shopping and cooking behaviors, adhering to medication and treatment plans, appropriately seeking healthcare, reframing negative thoughts, and expanding social support systems. 40% of participants reduced alcohol use, and 13.3% quit smoking. Participants and HHM endorsed improvements in joint pain, sleep, energy, stress, and self-confidence.
Implications for Translation to Practice/Further Study/Policy: Preliminary data suggest that participation in the UA DPP can increase ancillary healthy behaviors and improve health-related outcomes for attendees and non-participating HHM. Future research will include semi-structured qualitative interviews and longitudinal research to determine the longevity and sustainability of these health behavior changes and their impact on reducing the progression to T2DM. These results may encourage more referrals from healthcare providers to the program, reduce direct and indirect diabetes-related costs, and impact health policies that provide funding for program expansion and sustainability.

Psychosocial Determinants of Obesity Among Arab American Women: A Qualitative Approach

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Purpose: The overall aim of this study is to explore the psychosocial factors that affect the AAW's obesity and patterns of eating behaviors.

Background: Overweight and obesity have become a global problem, affecting both developed and developing countries. According to the World Health Organization, 39% of adults aged 18 and older are considered overweight (defined as body mass index [BMI] between 25 and 29.9 kg/m^2) and 13% considered obese ($BMI \geq 30 kg/m^2$) worldwide in 2016. In the United States, overweight and obesity have affected Americans of all ages, sexes, and racial/ethnic groups over the last several decades. More than two thirds (69%) of American adults were considered either overweight (34%) or obese (39.8%) in 2015-2016. According to the Centers for Disease Control and Prevention (CDC), obesity is associated with poorer mental health outcomes, and it increases the risk for several chronic diseases including heart disease, stroke, type II diabetes, and certain types of cancer. Adopting health promotion lifestyle behaviors is still a challenge for ethnic minorities. Arab Americans are understudied minority group in the United States and their health needs and risks have been poorly documented.

Methods: The proposed study will utilize the qualitative descriptive design to explore the participants open-ended responses on a question **"What a typical day looks like."** The responses will be collected through a semi structured interview. **Sample:** It is anticipated to complete 15-20 interviews; however, the number of interviews is determined by the achievement of data saturation. **Analysis:** Content analysis methods will guide the analysis; this method is defined as study of recorded human communication. It is considered well suited to answering the question of who said what, to whom, where.

Results: After reading the narratives, operational definitions will be developed for the items of overweight and obesity. Next, the researcher will iteratively code independently and collaboratively, and any coding differences will be settled by consensus. Coding activities will lead to categories, and themes will be identified.

Implications for Translation to Practice: The findings of this study will provide a basis for future research among Arab American women, including intervention studies and the development of health policy initiatives and programs.

Bi-Weekly Educational Phone or Video Calls in Managing Type 2 Diabetes

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Background: Uncontrolled diabetes remains a significant health burden in the United States. Patients with uncontrolled diabetes are at higher risk for developing diabetes-related complications such as problems with the eyes, heart, kidney, teeth, and nerves. More health care resources are spent on diabetes than any other health care condition.

Multiple type two diabetic (T2DM) patients are assigned to these rural clinics in Washington. Despite standard three-month diabetes follow-up appointments with the primary care provider and evidence of diabetes self-management education (DSME) provided by the clinical pharmacists at these rural clinic, glycemic control among most T2DM patients remains inadequate. A gap exists in understanding why most T2DM patients assigned to this rural clinic are non-adherent to diabetes management plans. Many studies were done to understand why T2DM patients were non-adherent to diabetes management plans. Some studies were done to understand the significance of diabetes self-management education to manage T2DM. However, very few studies were done to understand whether continuous reinforcement of diabetes self-management education using different modes of delivery could help control hemoglobinA1c (HbA1c) levels and improve diabetes knowledge among T2DM.

Purpose: This study aims to evaluate the effectiveness of patient-centered diabetes education via phone or video calls bi-weekly for 12 weeks. Participants must be English-speaking with an HbA1c > 7.0% and a standard diabetes care visit immediately prior to recruitment. Effectiveness will be measure by 1) improved HbA1c levels and 2) increased diabetes knowledge among T2DM patients. Diabetes education will be provided to English-speaking adults with T2DM.

Methods: A pretest-posttest design is being used to compare diabetes knowledge based on the DKT2. The Cronbach's alpha of DKT2 for the general test is 0.77 and for the insulin use subscale is 0.84. 22 participants were recruited following an HbA1c measurement was taken confirming eligibility. Following consent, the participants completed a demographics survey and the DKT2, and it was determined if participants preferred phone or video calls. The primary investigator is conducting bi-weekly education with individual participants. At 12 weeks, participants will follow up with their provider for a standard three-month diabetes follow-up where a post-intervention HbA1c and DKT2 will be collected. A paired t-test, descriptive statistics, and multiple linear regression analysis will be conducted to evaluate for change in the HbA1c readings and Diabetes Knowledge Test (DKT2) to determine the effectiveness of the intervention. A paired t-test will be used to analyze the HbA1c and DKT2 data. Descriptive statistics will be used to analyze the demographic data and its association with the pre and post-data points. Multiple linear regression analysis will be used to predict the outcome of the variables.

Implications: This study will examine if the continuous reinforcement of diabetes self-management education through bi-weekly individual phone or video calls for 12 weeks 1) lowers the HbA1c levels and 2) improves diabetes knowledge among T2DM patients. The findings from this study will be shared with this rural health clinical pharmacist to empower T2DM patients to improve glycemic control, promote diabetes self-care and management, and decrease diabetes-related complications in diabetic patients.

Funding: Health Resources & Services Administration (HRSA)

Diabetes Education Among Nepali Immigrants and Bhutanese Refugees

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Background: Diabetes contributes to 1.6 million deaths and $327 billion in medical costs annually. Data shows 20.6 % of Asian Americans have diabetes, 32.2 % have prediabetes. South Asians have the highest prevalence of type 2 diabetes among Asians. The number of Nepali immigrants and Bhutanese refugees of Nepali origin is increasing in the United States. There are no current diabetic dietary education interventions that focus on their cultural, nutritional needs. Upon literature review, no articles were found that studied the impact of diabetic dietary education on these patient populations. Immigrants and refugees have reported limited benefits from conventional western diabetic dietary education. The conventional western diabetic education has been labeled as overwhelming and challenging to understand and not focused on their cultural dietary needs.

Purpose: This study aims to examine the effect of culturally tailored diabetes dietary education on the management of diabetes among Nepali immigrants and Bhutanese refugees of Nepali origin. The effect will be evaluated by measuring hemoglobin A1c, fasting blood sugar, and diabetes self-management confidence level before and after diabetes education.

Method: The sample for this pilot study will include a minimum of thirty adults of Nepal or Bhutan of Nepali origin diagnosed with diabetes or prediabetes, who speak either Nepali or English, and reside within a 60 miles radius of Kent, WA. Participants will be recruited through convenience and snowball sampling. Measures assessed for this study include pre- and post-intervention hemoglobin A1c (HbA1c), fasting blood sugar, and confidence level in the self-management of diabetes. The diabetes self-management confidence level will be measured using the eight question Stanford Self-Efficacy for Diabetes instrument (SMRC, 2009)

The intervention is 30-minute interactive one-on-one diabetes dietary education sessions adopted from Harvard Healthy Eating Plate (Harvard Medical School, 2011). After the education session, four individual telephone follow-up calls for education reinforcement will be conducted biweekly for the first month and monthly for the second and third months, then followed by post-intervention measures. Recruitment and intervention will occur between October 2021 and March 2022.

Descriptive and non-parametric statistics will be used to assess categorical variables, including demographics. Paired samples t-test will be conducted to compare hemoglobin A1c, fasting blood sugar, and confidence level of diabetes self-management before and after dietary education.

Implications: Completion of data collection and preliminary analysis is projected for March 2022.This study will contribute to the body of knowledge informing culturally adapted diabetes dietary education for a unique and underserved population. Findings may inform current practices of healthcare providers and serve as a basis for additional studies to examine the impact of culturally specific dietary education for South Asian immigrants or people of different ethnic origins.

Funding: Health Resources & Services Administration (HRSA) & Advanced Nursing Education Workforce (ANEW) at the Pacific Lutheran University School of Nursing. Award # T94HP30874

A Healthcare Provider Needs Assessment Regarding Transgender Patient Health

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Objective: This study sought to identify education and training needs of university health service providers regarding transgender patient care. Transgender patients are a vulnerable population who tend to have negative health outcomes. Limited information exists regarding transgender patients and their providers at student university health services nationally.

Methods: The researcher conducted a one hour semi-structured focus group with the professional staff at a Midwestern state university health service. The focus group conversation was guided by a list of prepared questions but other issues were allowed to arise. Two readers qualitatively analyzed the focus group transcripts for predominant themes.

Participants: The professional staff attending the focus group consisted of two nurse practitioners, two licensed professional counselors, and two counseling psychologists.

Results: Five themes emerged from the focus group data that summarized provider concerns: range of gender identity issues, socioeconomic factors, healthcare provider limitations, specialty care needs, and gender inclusive data collection issues.

Conclusions: Specific provider needs derived from the themes included: advanced workshops on the care of transgender individuals; elaborated gender identity data collection; reliable referral networks for sensitive patient situations; and increasing collaboration between counseling and other health services with outreach and additional training opportunities. Culturally sensitive care will likely improve health outcomes for transgender patients.

Amplifying the Voices of Underrepresented Students in Nursing Education

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Purpose: The purpose of this process improvement project is to engage underrepresented (UR) nursing students in organizational development processes to improve college climate surrounding equity, diversity and inclusion (EDI).

Background: The current nursing workforce is not representative of the increasingly diverse population within the United States. This disproportionate representation in the workforce impacts cultural humility and relevancy in delivery of care for underserved populations. Undiversified student composition in nursing education directly contributes to a nondiverse workforce. As academic nursing works to improve EDI within programs, it is important that all constituents are involved in the development of these processes, including students. To address the need for reform, UR students felt compelled to significantly contribute towards institutional efforts in improving the college climate around EDI.

Project Description: The College of Nursing (CON) EDI task force was created in August 2020 and comprised faculty, staff, and a group of intraprofessional nursing students. Guided by the Inclusive Excellence Framework and Multicultural Organizational Development Theory, the EDI task force engaged in process improvement activities to develop a strategic plan for EDI at the CON.

Methods: To focus efforts of task force members, four pillars were developed in the following areas: 1) Faculty and Staff Development, 2) Admissions and Curriculum, 3) Student Engagement, and 4) Community Engagement. The Student Engagement Pillar (SEP) was led by a group of BSN, Masters entry, and PhD students considered UR in the profession. The SEP conducted four town hall listening sessions and assessed findings from a cross-sectional culture and climate survey. These activities resulted in the SEP creating bylaws for a formal student committee with priority action items to improve the academic experiences and success of UR students at the CON.

Assessment of Findings and Outcomes: Findings support there is a need to increase an EDI presence in the curriculum and educational processes, and strengthen student support structures for UR students. As a result, the SEP drafted bylaws and created the EDI-Student Nursing Advisory Committee (EDI-SNAC). The EDI-SNAC will serve as student advisory body to the newly formed CON EDI shared governance committee.

The SEP were also key members in writing college value statements, an Inclusive Excellence statement, and a pronoun statement. Due to the advocacy of the SEP, these statements, along with an Indigenous Land Acknowledgement, have now been integrated in student handbooks, course syllabi, and the online learning management system. Additionally, SEP members advocated for integration of LGBTQ+ SafeZone training into curricular activities, which is now part of courses in the DNP and BSN-Integrative Health programs. Ongoing assessment of EDI-SNAC will be conducted through surveys.

Conclusion: Incorporating nursing students in process improvement and organizational development opportunities provides future RNs, APRNs, clinical systems leaders, and nurse scientists invaluable intraprofessional experiences in leadership and policy. Curated programming and activities for EDI also serve as a mechanism to increase a sense of belonging for UR students in nursing. Further research is needed to evaluate the effect of EDI programming on success predictors for UR students in nursing education.

An Exploration of Nursing Faculty's Perceptions of DEI in Curriculum and Pedagogy

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Purposes/Aims: Identify themes about faculty perceptions of DEI in curriculum and pedagogy. To inspire faculty engagement in the process of creating transformation and change that improves the teaching-learning community with respect to DEI

Rationale/Background: The *Essential*s for professional nursing education published by the American Association of Colleges of Nursing "feature(s) 8 concepts which are central to professional nursing practice and are integrated within and across the domains and competencies." (AACN, 2021) One of the eight concepts is diversity, equity and inclusion (DEI). "DEI—as a value— supports nursing workforce development to prepare graduates who contribute to the improvement of access and care quality for underrepresented and medically underserved populations" (AACN, 2021). The Loretto Heights School of Nursing (LHSON) is committed to DEI and is exploring ways to create responsive systems and methods to teach within an inclusive pedagogy.

In order to increase expertise and create transformation, the first step is investigation of faculty beliefs, attitudes, and abilities in the teaching of diversity/inclusion. Many authors have noted that unless the faculty is engaged and involved in the process of examination of our values, beliefs, and actions, success in creating meaningful change is limited (NLN, 2016).

Methods: This is a qualitative descriptive study using guided focus group narrative design. The underpinning method is participatory action research (PAR), which promotes action, engagement, and decision making through critical reflection of a community while gathering much needed data or knowledge in order to improve the world through transformation and change (Baum,2006). The community for this study is the teaching community of LHSON.

The study is aimed at discovering the faculty perceptions of the meaning of diversity and inclusion in the nursing profession, the impact of diversity education on overall student learning, identifying DEI objectives in courses and strategies used to actualize them, barriers related to diversity education and inclusivity, and self-efficacy of teaching or promoting diversity and inclusion.

Assessment of Findings/Outcomes Achieved: Data collection is currently in process. Thematic analysis will be performed using qualitative data analysis strategies: immersion in data from verbatim transcripts, constant comparison, and assignment of themes and patterns (Lincoln and Guba, 1985).

Conclusion: The themes derived from this study will be utilized to plan and implement an inclusive pedagogy. Specifically, the findings will identify: interventions aimed at addressing the barriers, promote understanding of the need and impact, integrate concepts of DEI into the graduate and undergraduate nursing curriculum, and empower faculty to facilitate courageous conversations in the classroom at our institution.

Community Dwelling Veterans: SDOH, Patient Activation and ACES

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Purpose: The purpose of this research is to better understand rural community dwelling Veteran's health related needs post Covid-19, early life experiences that may impact adult health status (Adverse Childhood Events - ACES), level of patient activation, and preferences when making healthcare treatment decisions.

Background: As a nation, we are experiencing an unprecedented crisis in the mental healthcare of Veterans. Between 2007 and 2017 the number of Veteran suicides doubled; the number of suicide attempts is unknown. Recent times have been have characterized by high levels of societal and political unrest locally, regionally, nationally and internationally. In addition, the Covid-19 pandemic and recent events in Afghanistan present unique challenges for Veterans, further exacerbating physical, mental health and substance abuse problems. As our Veteran population becomes more diverse, attention and commitment to health equity becomes increasingly important. Health disparities within the Veteran population can be social, economic and/or environmental in nature given the great diversity of people who comprise our nation's Veterans. Empirical data collected during this study will be used to guide the development community informed interventions to enhance Veteran patient activation and engagement.

Sample and Setting: This community informed research project was conducted through a collaborative partnership between Joining Community Forces and a College of Nursing (CoN). Joining Community Forces (JCF) is a volunteer community organization comprised of leaders in local organizations dedicated to serving Veterans. Veterans are currently being recruited during Veteran centric community events within the community.

Methods: A cross sectional descriptive, comparative design is being used to guide this study. Data is being collected using valid and reliable instruments to measure Social Determinants of Health, Patient Activation, Decision Making Preferences and ACES. An instrument to gather demographic information specific to the military culture was created collaboratively with Veterans and Veterans support organizations.

Results: Data collection is currently in progress and will be completed by 11/30.

Implementation of a Transgender Toolkit to Enhance Rehabilitation within WA State DOC

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Background: There is limited research and data collection about the lived experience of transgender persons. Existing evidence suggests that transgender persons within the general population are at increased risk of health and psychological risks. Incarcerated transgender individuals have increased impact from social determinants of health that attribute to high rates of incarceration in comparison to other demographic groups within the prison system. In addition to these factors that impact health, safety both inside and outside the correctional system is significant. The vulnerability of transgender people due to safety concerns and lack of resources including specialized healthcare is amplified during incarceration.

Purpose: The purpose of this project is to create and utilize a toolkit improve self-efficacy and advocacy for transgender inmates to improve access to medical care, mental health and other resources through education and guidance in understanding policies and procedures during incarceration. Improvement of self-efficacy believed to enhance rehabilitation and improve outcomes during incarceration and reintegration into community after sentence has been served.

Method: A mixed method design with longitudinal data collection will be used. A survey with demographic questions and self-efficacy scale questions will be distributed prior to focus group sessions with transgender inmates within correctional facilities. Guided questions regarding perceptions about barriers, efficacy, and knowledge about accessing information and services related to health, property, searches, and other concerns during incarceration will be used during the focus groups to obtain qualitative information to develop the toolkit. The finished "toolkit" will be a brochure type document that will serve to provide key resources specifically useful to transgender inmates. The toolkit will be distributed with education about the use of the tool and post intervention surveys with the same self-efficacy questions will be administered and collected at the time of tool distribution. Post intervention surveys with self-efficacy scale questions will be distributed and again 4-6 weeks after tool distribution. Survey data will be analyzed to assess any changes to self-efficacy scores.

Implications: One of the primary objectives of incarceration is to promote rehabilitation so that individuals have capacity to successfully reintegrate into communities without recidivism. Many transgender individuals endure additional obstacles making navigation through society challenging and incarceration increases this difficulty. Self-efficacy may provide foundational capacity for development of resilience.

Funding: HRSA Anew Grant for trainee related expenses at Pacific Lutheran University, School of Nursing Award # T94HP30874

Increased Access to Nursing School: Instituting Holistic Admissions Process

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Purpose/Aims: This project is to identify a collaborative approach between Nursing and Admissions in a private, non-profit university to design a Holistic Admissions Process to support efforts to admit, retain, and graduate nursing students from underrepresented racial, ethnic, economically and/or educationally disadvantaged backgrounds.

Rationale/Background: Universities are under pressure to graduate students who will succeed in the workforce and meet labor market demands. Healthcare agencies are facing workforce shortages, an increasingly diverse patient population, and transformative changes to health care systems. They desire graduates who possess personal qualities, professional skills, and experiences to be successful in workforce and meet community needs. Nursing schools' goal is to admit a diverse body of students who will excel academically and have qualities needed for success in the current work environment. Nursing lags behind other professions in implementing Holistic Admission to help meet this goal. Applicants are often denied admission into nursing school due to marginalized educational and social environments affecting their opportunities for advanced education.

Description of Project: Kotter's Eight Stage Change Model is being used to create, engage, and implement this planned Holistic Admission Project. The beginning steps involve creating the climate for change followed by engaging and enabling the organization. The project uses the AAMC Experiences-Attributes-Metrics Model in identifying admission criteria. As a result, the proposed admission criteria changes include efforts to realign admission criteria scoring, identify more relevant written essays or video questions, and implement new scoring rubrics. This project supports the goal to increase the nursing workforce diversity needed to reflect the diversity of the communities where nurses serve.

Assessment of Findings/Outcomes Achieved: Once implemented, the planned assessment will involve tracking progression of students admitted with the Holistic Admission Process through the nursing program and compared to progression of all students in the cohort through tracking of measures: final GPA, and NCLEX score from 1st attempt. This project will benefit the profession of nursing by potentially increasing the diversity of the profession and meeting needs of populations served.

Conclusion: The planned Holistic Admission implementation process was initiated previously, but was delayed due to faculty and admission staff attrition as well as identified COVID-19 related challenges. Re-introducing Holistic Admission is necessary to engage new faculty and staff in the process. Additional steps will involve collecting outcome measurement data in an IRB approved comparison study that will expand knowledge through the data collection about students admitted through a holistic admission process. Following Kotter's change process will lead to an organizational policy on Holistic Admissions. By promoting social equity with an emphasis on student success, the marginalization cycle can be broken.

Multi-Course Introduction of the LEARN Model of Communication in a BSN Cohort

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Purpose: The LEARN model was chosen to direct patient-centered assessment and shared decision making and to discuss how the model was integrated into didactic, laboratory, and simulation learning experiences for a cohort of first semester pre-license BSN students.
Background: The LEARN model was developed to improve cross-cultural communication, however, it is applicable to every patient encounter. Effective, patient-centered assessment is critical to providing quality nursing care. The simulation center updated patient scenarios to better reflect the populations and social determinants of health that the students will see in clinical practice. With that, there was a need to focus on communication skills that encourage open dialogue and shared-decision making.
Description of the Project: New holistic patient scenarios were developed in the simulation center. The LEARN model was chosen as a tool to help students reduce implicit bias and take a patient-centered approach to these new simulation scenarios. The LEARN model is a pneumonic for listen, explain, acknowledge, recommend, and negotiate. Using the LEARN model, students begin their assessment by focusing on the patient’s perception of their current health needs. Steps are included to acknowledge differences in perceptions and to discuss the patient’s beliefs and preferences that are important to include in care planning. As negotiation of care occurs at the end, the student has a better understanding why the patient may or may not be willing to accept the recommended treatment and will continue to help the patient find an acceptable plan of care.

Faculty from across courses and appointments agreed to introduce, reinforce, and allow time for practicing the LEARN model. A handout on the basics of the LEARN model was first introduced in the didactic section of the assessment course while learning about health history. The model was reinforced in the fundamentals of nursing course didactic section during the module on social determinants of health by watching a simulation center developed video depicting a student demonstrating use of the LEARN model with a patient and post-viewing discussion. Assessing each patient as a unique individual rather than making assumptions based on a demographic characteristic was emphasized. Further reinforcement occurred during the assessment laboratory practice time and again in the fundamentals of nursing didactic. The students were also able to implement the model during the fundamentals of nursing course simulation scenario.
Outcomes Achieved: Curricular integration of the LEARN model across courses and course delivery methods was achieved. Faculty with different courses and roles were able to work together to support implementation of the model. Students received a reinforced message of patient-centered care with shared decision making.
Next Steps: Next steps include continued integration across semesters. This will involve collaboration amongst faculty in didactic courses, laboratory settings, simulations, and clinical experiences. Additionally, studies will be conducted to assess differences in communication patterns demonstrated in simulation activities between cohorts of students who have and have not received training in the LEARN Model, measured by the 9-item Adapted Health Communication Assessment Tool (HCAT©).

This Is the Place: Expanding Diversity in Nursing through Holistic Admissions

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Lack of diversity in the nursing workforce contributes to health care inequities and negative patient outcomes. Increasing diversity of nursing students for development of a workforce that reflects the diverse patient population in the U.S has posed challenges for nursing schools across the country. To meet this challenge the University of Utah College of Nursing created and implemented a holistic admissions incorporating best practices in holistic admission. Our process removes reliance on traditional metrics that potentially disadvantage diverse students and considers unique attributes and accomplishments of the 'whole' person. A task force with broad representation of faculty and student services created a four phase application process. A web-based application was developed and evaluated for completeness. It included an evaluation of attributes and accomplishments from applicant and professional reference responses to behavioral based questions. A customized interview with questions based on the four domains of respect, integrity, responsibility, and compassion followed using a using a cloud-based assessment platform. We have successfully implemented our holistic admissions application process for our undergraduate program for six admission cycles. Initial analysis indicates faculty and applicant satisfaction. The Task Force continues to evaluate the process, including thematic evaluation of faculty and applicant satisfaction of process and format, statistical analysis of diversity and performance using applicant demographics, admitted student demographics, and academic data.

Weight Stigma & Communication Skills: Experiential Learning to Reduce Bias

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Purposes: The purpose of this research is to determine if simulation: a.) improves communication skills; b.) reduces explicit bias towards patients with obesity.

Rationale/Background: Studies have found healthcare providers including doctors, nurses, and student nurses have bias towards patients with obesity. Weight bias in healthcare is attributed to delayed care, decreased trust in health care providers, and poor communication with people who have obesity. Perceptions of weight stigma leads to poor health outcomes in these patients. Research involving medical students and standardized patients with obesity was associated with decreased stereotyping and increased empathy towards patients with obesity. Providing nursing students with communication tools and exposing them to patients with obesity in simulation may reduce weight bias which could lead to improved care for patients with obesity.

Methods: Eighty first-semester nursing students were asked to participate in a weight bias survey that included the Fat Phobia Scale and Beliefs About Obese Persons Scale (BAOP) during their program orientation. The Fat Phobia Scale and BAOP are widely used explicit bias measures towards people with obesity. Both of these scales were developed for the use in weight research and have demonstrated a high level of reliability. In addition, qualitative questions to determine perceptions on obesity were asked in the survey.

Using didactic teaching methods, students were introduced to and provided opportunities to practice the LEARN model of communication. This framework was developed to improve provider/patient communication and patient care. Towards the end of the semester, students will have a simulation experience with a patient with obesity who is seeking healthcare for an issue unrelated to obesity. After the simulation, the students will complete a post-survey of the Fat Phobia Scale, BAOP and qualitative feedback opportunity.

As a control measure, 77 second-semester nursing students who did not receive LEARN training were asked to participate in the weight bias surveys during the first two weeks of the semester. In the second week of the semester, students had the same simulation scenario with a patient who is obese. The student/patient interaction was evaluated using the post-survey.

Results: Data collection will continue throughout the Fall 2021 semester. Both 1st and 2nd semester students who completed the pre-survey often responded that all patients are to be treated the same. Preliminary findings from the second semester nursing students after the simulation scenario included the importance of communication, adapting care, and promoting trust.

Implications for Translation to Practice: Weight bias in healthcare has been well documented to be a barrier to providing quality healthcare. Teaching students effective communication strategies and offering the opportunity to practice in simulation may facilitate a better understanding of patient perspectives and reduce bias.

Funding: The Jody DeMeyer Endowment for funding of the undergraduate research assistant program, Boise State University

A Roadmap to Advance Concept Development of “Civility” in Nursing Education

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In nursing education research, civility and incivility studies have thus far defined polite and impolite behaviors between nurse educators and learners and measured perceptions of incivility. “Civility” suggests extrinsic compliance to what can be a fuzzy standard dynamically defined by those in power, while incivility encompasses behaviors that resist or conflict with these often unspoken standards. Given this conceptual fluidity around power, civility and incivility constructs warrant critical examination and deeper conceptualization, especially in light of broader contemporary societal efforts to dismantle structural barriers in education and healthcare systems that perpetuate racial inequities and cause harm.

Critical analysis of the literature via a scoping review has shown conceptual gaps in civility and incivility studies related to power and intersectionality. Researchers have not used theoretical frameworks to guide civility or incivility research designs or analyses. Further, no researchers have developed civility or incivility theory for nursing education or practice. One measurement instrument has been developed, the Incivility in Nursing Education-Revised (INE-R) scale. The INE-R, a psychometrically tested and validated tool, was informed by early qualitative research studies that privileged White educator and learner participants. Further research is needed to test validity threats to the INE-R scale and to help advance theory development. Specific effort must also be made to invite under-represented educator and learner participants of color into the research.

To address the conceptual and research gaps and concerns outlined here, the poster will visualize a mixed methods approach. The poster will outline a critical rationale for ongoing, in-progress research that aims to more deeply understand civility and incivility as constructs through analysis of research thus far and purposeful engagement of participants of color in innovative approaches.

The first study, now completed, critically analyzed the literature on civility and incivility in nursing education via a scoping review, identifying conceptual and methodological gaps, as well as noting the position of faculty researchers’ power. The second study aims to use topic modeling text mining techniques on a corpus of all INE-R scale manuscripts published to date to quantitatively explore frequencies of latent qualitative themes related to construct measurement. Thematic findings from text mining will inform a protocol for a third study, whereby a purposive sample of nursing educator, learner, and “learning partner” (such as simulationists and nursing school administrators) participants of color will complete the INE-R scale and engage in cognitive interviews with the principal investigator about the INE-R scale.

The objective of these three studies is to gain a multi-dimensional conceptualization of “civility” and “incivility” and to assess how participants of color make sense of the constructs and the scale. We anticipate learning from participants if the constructs and measurement instrument might implicitly support structural racism in upstream nursing education and, by extension, downstream practice.

Finally, the mix of quantitative text mining of the literature and qualitative interview findings about the INE-R scale may advance new theory development about what constructs support thriving learning cultures that dismantle systemic barriers to diversity, equity, and inclusion in nursing education.

A Trauma Informed Approach to Training Sexual Assault Nurse Examiners

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Purpose/Aim: This project aims to explore the benefits of a trauma-informed approach to nurse education by reflecting on the use of this approach to educate nurses enrolled in a sexual assault nurse examiner clinical skills course.

Rationale/Background: Sexual assault nurse examiners work directly with patients that have experienced recent traumas, including sexual assault and strangulation. Due to recurrent exposure to trauma, these nurses are at a heightened risk of experiencing vicarious trauma. Even the training process for sexual assault nurse examiners can itself be traumatizing, depending on a nurse's personal and professional background. To train resilient and capable sexual assault nurse examiners, a trauma-informed educational approach to their training was adopted for the clinical skills course.

Description of Undertaking: The training team for the clinical skills course purposefully infused the curriculum with community and capacity building exercises modeled from Capacitar International. The training team also recruited experienced sexual assault nurse examiners to provide expertise, peer support, and guidance during the training. Standardized patients were provided with pre-training education to ensure that they were empowered to guide participants throughout the exam process, as well as to offer constructive feedback. During the training, participants were afforded time to debrief and space to share their anxieties and challenges, as well as successes. Participants were also introduced to professionals engaging in advocacy or legal work to allow for networking and a sense of community with individuals that work with survivors of sexual violence.

Assessment of Outcomes Achieved: The clinical skills training has been implemented six times using this trauma-informed approach, including two trainings for community nurses and four trainings for Doctor of Nursing Practice students. Feedback from participants has been overwhelmingly positive. Despite feeling unprepared, anxious, or intimidated prior to the training, participants reported feeling supported, valued, and empowered during and following the trainings. When reflecting on past experiences, several participants indicated that this clinical skills training was the most positive and rewarding experience they had engaged in in terms of their nursing education.

Conclusions: With careful planning and coordination, a trauma-informed approach can be effectively utilized within nursing education. Utilization of a trauma informed approach allowed the training team to provide sexual assault nurse examiner training to nearly sixty nurses while minimizing their experiences of vicarious and secondary trauma. This approach was not only beneficial to participants, feedback from trainers and standardized patients mirrored that of the participants. Though the initial benefits are remarkable, it will be of future importance to determine if the training enhances the resilience of participants as they embark on their work as sexual assault nurse examiners. If it were to demonstrate long-term benefits, the infusion of a trauma-informed approach should be adopted by sexual assault nurse examiner trainers and by nurse educators that provide instruction on other topics that students find to be intense or triggering.

Funding: Health Resources and Services Administration (HRSA-21-016) / Grant No. T96HP32508. Mandatory Disclosure: This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) with awards of up to $500,000 with 0% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.

An Evidence-Based Education Program on HIV Organ Donation

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Problem: In 2013, President Obama signed the HIV Organ Policy Equity (HOPE) Act that reversed a federal ban on organ donation among persons with HIV. Previously, the 1988 National Organ Transplant Act had banned any individuals with a history of HIV and/or AIDS from donating organs. Public awareness of the HOPE Act is limited; and there are few registered donors in the HIV community. There is also a lack of education about HIV organ donation included in organ donation presentations.

Method: The purpose of this evidence-based project was to educate a lesbian, gay, bisexual, transgender, and queer (LGBTQ) community regarding organ donation and the HOPE Act. Increasing awareness will lead to higher rates of organ donations that may be made available in the HIV community. A virtual education program was presented to LGBTQ participants who attended a clinic in Orange County, CA. Change in knowledge/attitude was assessed pre and post program.

Innovative Project: An important finding of this evidence-based project was that there was a lack of knowledge about HIV organ donation. There was also a great deal of interest in learning more about HIV organ donation and the outcomes. All participants expressed a desire to be an organ donor as a result of the educational program. The outcomes of this project reinforce the importance of educating LGBTQ community members and people living with HIV on HIV organ donation and the HOPE Act.

Significance to Nursing Education: Challenges at the community, organ procurement organization, and transplant center levels still need to be overcome to reach the full potential of the HOPE Act and to increase the number of registered HIV+ donors. Many issues raised by participants, such as seeking more information on Hope Act outcomes, emotional and psychosocial concerns, and risk for superinfections are implications for further study.

Recommendations: Community agencies should provide the most current education to all LGBTQ community members especially those living with HIV/AIDS. Further implications for healthcare providers include education to community and advocacy for the vulnerable population of people living with HIV.

Chemotherapy Instruction Improvement Project

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Purpose: This project provided an accredited nursing education session to standardize the chemotherapy education process. The project aimed to evaluate nursing satisfaction using a published survey and implementing a standardized chemotherapy patient education program. Additionally, the project tracked patient satisfaction scores to the "Explained management of chemotherapy side effects" on the Press Ganey survey to identify changes that may be attributed to improved patient education.

Rationale/Background: Patients receiving chemotherapy for the first time have significant educational needs, which chemotherapy nurses are responsible for meeting. Patients often receive chemotherapy education immediately prior to the first treatment, and nurses provide education while simultaneously caring for other patients.

Nurses are concerned about their patients because of the complexity of chemotherapy treatment and potential for complications related to inadequately managed side effects. There is limited information available to guide nurses on best approaches to prepare clients for chemotherapy.

Theoretical Framework: This project was conducted using a Plan, Do, Study Act approach under the modern change theory. The project team identified a problem with the patient education process. The institution's leadership supported the initiative to standardized patient education program and promote consistent communication between staff and patients. The team implemented and evaluated the standardized process.

Methodology: A targeted intervention was offered to registered nurses at a Southwestern Oncology Center. Over 70% of the staff nurses attended a live accredited nursing education session aimed at standardizing the education process. The facility's Institutional Review Board approved the project. The project leader examined over thirty pre- and post- implementation Likert-type surveys completed by chemotherapy certified registered nurses. Results were analyzed using the Mann Whitney U test. Press Ganey patient satisfaction scores for "Explained management of chemotherapy side effects" were assessed for changes at six months pre- and four months post- implementation.

Outcomes Achieved: The analysis of the surveys indicated improvement over seven of eight nursing satisfaction measures. Satisfaction measures included comprehensiveness of the chemotherapy education process, if the process maximizes the nurses' efficiency with patients, patients being well prepared for chemotherapy, having tools and resources to enhance the education process, time spent on chemotherapy education, if the process is consistent and standardized, and impact of the chemotherapy education process on job satisfaction. Statistically significant improvement to "The chemotherapy education process is consistent and standardized "p 0.04. There was a small positive trend in Press Ganey results with a change from the lowest pre- intervention score 86.3 to 89.72- three months post intervention.

Conclusions: Effective patient education is an important component of oncology nursing care. Standardized chemotherapy education gives patients an understanding of management of chemotherapy side effects and reportable symptoms. This project provides an example of the positive effects on nursing when a health care institution prioritizes consistent and standardized patient education. Over time, patient satisfaction may improve with better understanding of what to expect with chemotherapy and how to manage side effects. Additional interventions are necessary to further improve the chemotherapy patient's experience.

Develop Nursing Research through Collaboration: Change the Academic Culture

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Purpose/Aims: To herald and emphasize the importance of collaboration in building research and establishing a professional support system for those in the tenure-track position at a college or school of nursing.

Rationale/Background: The trinity for success in the tenure-track position at any college or school of nursing encompasses published articles, funded research, and teaching excellence. For new tenure-track faculty, these expectations represent the gold standard used to determine the outcome for continued investment by the college or school of nursing at the annual or third year review. Mentoring from seasoned nursing scientists comes in the form of dictatorial commandments:

- Dedicate at least 2 days to research;
- Publish 2 articles annually;
- Achieve excellent student evaluations; and
- Limit services to 1 or 2 committees.

These doctorally-prepared scholars exit a siloed situation to enter a cloistered lifestyle for the next 3-5 years, which feeds into fear of failure, imposter syndrome, and alienation from other scholars. Considering collaboration with anyone, from staff to colleagues on and off the campus, produces expressions of quandary, comments for avoidance, and/or maternalistic concerns for achieving tenure. There is little to no mentoring in support of collaboration as a mechanism to build a start-up research program and/or achieve a satisfactory review to maintain the academic position in nursing.

Brief Description of the Undertaking/Best Practice: In 2021, three tenure-track faculty members met to discuss individual research programs. Through the discussion, they recognized shared research interests with a shared vision and team-approach that promoted everyone's individual program of research. The team is using a mixed-methods approach to understand the health effects of COVID-19 among residents of a skilled nursing facility, specifically residents living with Alzheimer's disease or dementia and residents who experienced failure to thrive. This research effort has received funding through a school of nursing, facilitating the hiring of two research assistants.

Assessment of Findings/Outcomes Achieved: Collaboration can be a source of great opportunities for developing programs of research and fostering one's professional growth. This research team provides mutual benefits to all members because it promotes trust and respect diverse experiences and skills. This includes respecting each member's diverse learning and lived experiences, and research trajectory including methodology. This research team tackles complex and important problems to promote timely and high-quality work. Disagreements are an opportunity to learn something from each other through open discussion around challenges the team is experiencing. Our team is successful because of the appreciation for the team's diversity and culture, which facilities effective interaction, communication, and scholarly work.

Conclusion: By establishing research collaboration among tenure-track faculty, there is increased professional and peer support, which promotes individual programs of research. This collaboration is demonstrated in the writing of this abstract where each member contributed equally. Consequently, collaboration will support the success of the faculty members in achieving tenure. Importantly, it enhances the research team capacity to contribute to the growth of the school of nursing.

How Students Learned Psychomotor Skills during the Pandemic: A Qualitative Study

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Purpose: The purpose of this presentation is to describe how undergraduate nursing students learned psychomotor skills during the COVID-19 pandemic.
Background: Traditionally, nursing students have learned to perform psychomotor skills during skills and simulation lab sessions. In 2020 and 2021 the COVID-19 pandemic disrupted higher education, prompting schools to transition to online learning and limiting time in skills and simulation labs. It is largely unknown how students learned psychomotor skills during the pandemic.
Methods: The findings presented here are part of a larger phenomenological study that examined the lived experiences of nursing students learning psychomotor skills during the COVID-19 pandemic. Eight nursing students representing three nursing schools in the United States participated in this study. In-depth interviews using open-ended questions were conducted, recorded, transcribed by the researcher, and then analyzed using thematic analysis to identify recurring themes. Data saturation was present. These themes were validated with the participants using a member checking process. An audit trail was kept to enhance dependability and confirmability.
Results: Participants recognized that they still had to learn how to perform psychomotor skills, even though the way they performed them looked different than it used to. Participants noted that professors were graceful with extensions and were committed to student learning even more than they usually were. Participants liked the smaller size of lab groups and felt that smaller groups improved learning. They noted that there was less time to practice skills, and that they had to use other ways of learning such as videos and online simulation, which were seen as inadequate substitutes for in-person learning. Participants also had to differentiate steps of the actual psychomotor skill with steps to protect themselves from COVID-19, since additional personal protective equipment (PPE) had to be worn during lab sessions. The additional PPE was seen as inhibiting skills learning.
Implications: Findings from this study suggest that nursing students are resilient learners who experienced added challenges when learning psychomotor skills during the pandemic. Participants acknowledged and appreciated their faculty members' added efforts, but acknowledged that the learning was imperfect during this time. Nurse educators may need to provide additional psychomotor skills practice opportunities for this cohort of students in the future, and partner with potential employers to address any potential gaps in psychomotor skills learning and performance.

EDUCATION ISSUES

Implementation and Evaluation of a Virtual Escape Room on Obstetric Hemorrhage

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Objectives: To evaluate the use of an escape room as an innovative educational method and its impact on content application in a reproductive health course specific to obstetric hemorrhage.

Design: This is a quantitative, interventional, pilot study using a descriptive survey and convenience sampling of undergraduate nursing students at a public university.

Settings: A nursing school high-fidelity simulation lab and classroom were used to create a virtual escape room.

Participants: A total of 58 undergraduate nursing students from two different cohorts completed the escape room educational strategy.

Methods: A virtual escape room focused on an obstetrical hemorrhage topic was implemented. A clinical faculty acting as human avatar was present in the high-fidelity simulation lab, while each student team were in a classroom communicating via an online link. The goal of the escape room was to complete tasks, riddles, and puzzles to escape the room and successfully complete the learning process. Two six-point Likert scale survey were provided (at the end of the escape room, exercise and end of the semester) measuring student satisfaction and impact of the learning exercise.

Results*:* Feedback from students was collected with two different surveys and revealed positive student perceptions in the area of engagement, enjoyment, and application of knowledge in a fun way. The student's perception of the impact of an escape room was positive for applying evidence-based, safe patient care while meeting course objectives. Students reported they would like to participate in escape rooms built into additional nursing courses.

Conclusions: Escape rooms are an innovative teaching strategy to supplement traditional methods by using experiential learning. Nursing students perceive an escape room as a fun, engaging way to learn and apply knowledge. However, future research needs to quantify outcomes to provide support that escape rooms can help promote clinical judgment.

Interest in Evidence-Based Interventions to Improve Sleep during Hospitalization

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Aim: The aim of this patient-centered quality improvement project is to improve sleep during hospitalization and after discharge by informing patients about evidence-based sleep interventions, incorporating sleep education into discharge teaching, providing opportunities for non-pharmacological sleep interventions while hospitalized, and empowering patients to use preferred interventions following discharge. In addition to improving quality of health and patient satisfaction, the results will inform the development of a research study on improving sleep in Veterans after hospitalization.

Background: Disrupted sleep is common during hospitalization, and often persists for a year after discharge. Impaired sleep can interfere with recovery and negatively impact long-term function and quality of life. Veterans have a higher risk of sleep impairment due to elevated risk of sleep apnea, impaired sleep patterns during military service, and possible persistent trauma. Some of the common disruptions of sleep during hospitalization are not avoidable. However, hospital units have demonstrated that interventions can minimize the negative impact of bright light and noise at night. Additional interventions to improve sleep could be incorporated in the acute care hospital setting. In addition, nurse-provided education about strategies to improve sleep at discharge from the hospital could empower individuals to develop sustainable improvements in sleep.

Methods: The John Hopkins Evidence-Based Practice guidelines and the IHI Plan-Do-Study-Act (PSDA) framework were used in this Quality Improvement project. A literature review of sleep interventions was conducted. The team decided which sleep strategies to offer patients on an inpatient oncology unit, and compiled recommendations for sleep that were discussed with patients and provided at discharge. Prior to implementing the sleep hygiene education and strategies, unit baseline data was collected for two weeks from patients surveyed with the validated 6-question Richards Campbell Sleep Questionnaire which assesses sleep the night before. Nurses on the unit then incorporated teaching about sleep and offered evidence-based interventions to patients who expressed interest. The percentage of patients interested in learning about sleep strategies and the percentage who tried a specific intervention were tracked. Participating patients were surveyed about their sleep the night before and the night after the intervention. Statistical group comparisons of before and after and individual comparisons were conducted.

Results: A literature review of sleep interventions during hospitalization beyond ear plugs and eye masks was conducted. Nurses on the oncology inpatient unit at the Portland VA Health Care System hospital participated. A nurse on the unit who was part of a nurse residency program compiled the information about sleep provided to patients, and coordinated communication and data collection among the team. Restrictions on in-patient units during COVID-19 delayed the start of data collection. The literature summary, quality improvement recommendations for improving sleep, information about sleep provided to patients, and results of the study will be presented.

Implications for Translation to Practice: The importance of sleep in health and recovery is commonly overlooked during and following hospitalization. Teaching patients about sleep by providing evidence-based strategies and empowering patients to attain adequate sleep is an important role of nurses in a variety of practice settings.

Supporting Nurses across the 50 US States in Mandatory Reporting of Child Maltreatment

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Purpose: The purpose of this completed state-by-state study of nurses as mandated reporters of child maltreatment (CM) was to determine (1) how mandated reporting laws vary by state, (2) what information states provide to nurses about this responsibility on their child protection and Board of Nursing (BON) websites, and (3) what training and resources states make available to educate nurse mandatory reporters to ably fulfill their obligations. Our interest is in supporting nurses to expertly and equitably respond to suspected CM.

Background: Generic nursing education about CM falls short due to variation across states in CM definitions, contexts of mandated reporting, and penalties for failure to report. Nurses need specific resources to capably practice in response to state-specific regulations and specific patient and family situations. For example, recent legal cases document nurses' over-surveillance of parents with disabilities and suggest nurse bias and judgements about who is a good-enough parent compromises equitable CM reporting.

Methods: Summaries for each state's mandated reporting policies regarding CM were accessed and analyzed through the Rape, Abuse, & Incest National Network (RAINN) database. The Child Welfare Information Gateway website was used to identify state websites' resources and trainings for mandated reporters. BON sites for each state were also reviewed to determine if specifics on resources and training were present. Lastly, the Nursing Licensure Compact (NLC) website was analyzed to determine which states participate in the licensure reciprocity compact. Retrieved data was coded and imported into SPSS for descriptive analysis, and a Fisher's Exact Test was used to calculate the significance of categorical differences.

Findings: In specifying who is a state-mandated reporter of CM, 33 states (65%), including Washington, DC define profession-specific reporters, while 18 (35%) practice universal reporting. State websites offer generic information pertaining to CM and mandated reporting (n=11 [22%]), provide generic training courses (n=28 [55%]), and have at least one profession-specific training (n=12 [23.5%]), with only three of the 12 states offering specific trainings for healthcare professionals. State BON websites include information about licensed nurses' responsibility as mandated reporters (n=9 [17.6%]). Of the 34 NLC states, only two (5.9%) include mandated reporting information on the BON website. Of the 17 states that are not NLC members, seven (41.2%) have mandated reporting information on the BON website ($p=0.004$ using Fisher's Exact Test).

Conclusions: States offer little education about their unique reporting laws and policies, and few provide nurse-specific information or ensure that the BON website has links to state policy. Nurses are left with little information about how child protective services (CPS) works, and what resources are available for reported families. Mandated reporter training should be required for licensure, and as modules for continuing education. Pertaining to parents with disabilities, nurses need a stronger educational foundation about disabilities to provide holistic, quality care to this population. Lack of knowledge and empathy can negatively influence nurse attitudes toward people with physical and intellectual disabilities. Educational programs, employers, and state agencies all can do more in supporting nurses to successfully fulfill their duty as mandated reporters.

The Nursing Shortage: NEXus a Strategy for Workforce Replenishment

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Purpose: To describe an innovative strategy that enhances and expedites the graduation rates of nurses pursuing doctoral education who desire to become faculty at accredited schools of nursing tasked with educating the future nursing workforce.

Background/Rationale: The Covid-19 pandemic and its subsequent surges have all but decimated the nursing workforce in many parts of the country. Stressed, overworked, exhausted nurses have resulted in early retirements, "quitting", and double-digit nurse vacancy rates in some hospitals. The nursing shortage is proving fatal in some instances, where patients seeking care are turned away from multiple health care facilities due to lack of nursing staff and hospital beds, succumbing to their illness for want of timely medical intervention. Replenishing and growing the diminishing nursing workforce is a challenge, both in attracting qualified individuals into the profession, as well as securing enough nursing faculty to prepare them. Retirement and career changes may contribute to the shortage of qualified faculty. Faculty vacancies through retirement and career changes may result in qualified applicants being turned away from nursing programs. Nurse faculty prepared at the doctoral level are needed to complete graduate programs as timely as possible. Consortiums such as the Nursing Education Exchange (NEXus) can help expedite program completion of future faculty desperately needed to educate the next generation of nurses.

Description: In the early 2000s, the Western Institute of Nursing's intent was to explore ways of educating doctoral-prepared nurse educators and researchers through shared *complementary* resources across institutions. Inaugurated in 2005, this consortium has grown from four participating schools to 16, offering over 250 courses. The NEXus consortium affords timely degree progression for students through greater availability of course offerings outside of their home institution. In addition, this strategy also eases the institutional faculty shortage and associated costs by providing doctoral educated faculty without having to spend funds on faculty searches, hiring, and course development for classes already available through the Consortium.

Outcomes: As of 2019, there are 321 graduates earning PhDs, DNPs, and Master's degrees from NEXus participating schools that have taken a NEXus course. In a recent satisfaction survey of students (n=80), 96% agreed that enrolling in a NEXus course facilitated their remaining "on time" in their program of study. Over half of survey respondents (n=83) enrolled in a NEXus course because it was not offered at their home institution. A needs rating of 4.23 (out of 5) was reported by 85% of respondents that their NEXus course met their current needs.

Conclusions: A key strategy to ameliorating a critical nursing workforce shortage, is to have sufficient faculty educated to teach the future nurses needed to meet the health care needs of the nation. Increasing the higher education throughput of nursing faculty is a priority. Consortiums such as NEXus help potential nursing faculty have choice and flexibility in their graduate curriculum and help these students to stay on track and graduate on time.

The Use of Theory to Guide Undergraduate Nursing Education: A Scoping Review

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Purpose: The aim of this scoping review is to map how theory is used to guide undergraduate nursing education.

Rationale: Theory has been used to guide nursing practice and research across a wide range of cultures and settings. However, limited emphasis has been placed on theory and its application in nursing education. In addition, while theory-based nursing education has been recommended, little is known about how theory is currently used when educating undergraduate nursing students.

Methods: A scoping review was performed to identify knowledge gaps concerning the use of theory guiding undergraduate nursing education practices. Searches were conducted using CINAHL, CINAHL complete, and Medline databases. Search terms, including *nursing education, theor**, and *undergraduate*, were used, with initial searches yielding additional pertinent search terms such as *framework* and *model*. These were added to the search terms and articles were restricted to articles that are available in English. Additional articles were retrieved from other sources such as article reference sections and a prior literature appraisal matrix. Duplicate titles were removed, with 168 unique references remaining. Article titles and abstracts were screened for relevance to the question, "how does theory guide nursing education?" Articles that reflected a theoretical application for undergraduate nursing education were selected for the final analysis, yielding 20 articles. These articles were reviewed and discussed by four reviewers to determine concepts providing theoretical contributions to undergraduate nursing education. The concepts were aggregated to determine how theory informs undergraduate nursing student education.

Results: There was a consensus of all articles that theoretical underpinnings strengthen learning in undergraduate nursing education. The scoping review describes several ways theory is used to do this. First, theory can be used as a framework or scaffold on which to build knowledge and deepen learning. Theory is also used to infuse or teach concepts, such as caring, understanding the role of the nurse, or spiritual care, with four of the 20 articles describing a framework or theory to infuse spiritual care into an undergraduate curriculum. One article discussed a theory-based evaluation of undergraduate nursing student retention. Regarding article type, two were literature reviews, three were theory development, and three could be described as "how-to" articles. Four articles implemented at least some level of experiment, generally using comparison of groups or individuals using/not using the theoretical intervention. However, the bulk of the articles could be described as case-studies where the theory/theories were used for a singular purpose, and participants in the case studies were usually described as being "positive" about the infusion of the theory, model, or framework.

Implications: The scoping review identified several useful ways that theory can be used in nursing education, and many of the articles in the review recommended research or additional research to validate their findings. The positive consensus of articles included in this review towards theory-based nursing education supports formal research processes to further investigate its use. With the potential to improve nursing education, this is an effort worth pursuing.

Family Caregiver Perceptions of Social Interactions of Persons with Autism

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Autism is a life-long neurodevelopmental disorder characterized by challenges in communication and social interactions. Family caregivers to persons with Autism are at high risk for poor mental health outcomes. Social support has been identified as protective factors against these poor outcomes. However, there are barriers to social support for these caregivers related to the challenging communication and social interactions of their loved one. This study aimed to better understand the family caregiver's perceptions of social interactions of a person with Autism experiencing challenging behaviors. A single case basic qualitative study was conducted that included an interview and 7-day diary of the participant's observations of the social interactions of their loved one. Data was transcribed and analyzed using thematic analysis. Several themes were identified, and Sense of Coherence theory was applied to provide a theoretical framework for the findings. The essence of the participant's experiences is summarized as *walking this journey is keeping the world open while witnessing his challenges.* Social interaction is challenging, a finding supported by the extant literature. Positive social support appears to contribute to family caregiver resilience. Further study could examine the relationship between societal judgements/stigma of certain behaviors and the social support that is available to these caregivers at risk for poor mental health outcomes.

Implementing a Student-Led Holistic Nurses Chapter

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Purpose: The purpose of this project was to develop a student-led holistic nurses chapter as a space where students can learn to apply mind-body based modalities into their routine accommodating their unique lifestyle. This presentation aims to discuss the process of implementing a student let holistic chapter and the benefits of such a chapter.

Background: As a student pursuing a profession in healthcare, the topic of holistic health and self-care is discussed, but not to the extent of implementation for one's self. Students often lack the knowledge and space to pause and take care of their own physical and mental well-being. In efforts to promote actual application of holistic care for the individual nursing student, the Arizona Student Chapter of the American Holistic Nurses Association has been established at a nursing school in Arizona.

Model/Process: The Wellbeing Model developed by Dr. Mary Jo Kreitzer seeks to ensure wellbeing through six dimensions; health, relationships, security, purpose, community, and environment (Kreitzer, 2016). From this model, two initiatives were launched to increase discussion and action of self-care. First, Talking Circles promote community building, peer-mentorship, and support through open communication. Secondly, Wellness Workshops provide the opportunity for students to physically apply a multitude of health promotion modalities. Talking Circle and Wellness Workshop sessions are hosted once per month on a campus location to promote inclusion towards undergraduate and graduate students. All students are encouraged to join the student leadership committee to plan upcoming sessions and express desired healing modalities.

Outcomes: The project is still in progress with the intention of maintaining a sustainable chapter for continuous practice; first within the founding university, then to allow all state nursing students the ability to join. Formative evaluation based on discussion and observation of student initiatives provides evidence to support the positive impact and benefits of a student-led chapter. These benefits include students reporting lower stress levels, the ability to apply integrative health concepts to their own life and practice, and peer support.

Implications: From this project further discussion can be completed in regards to policy, practice, research, and inclusion. Chapter policy can be developed or solidified in regards to student driven processes and procedures of the new chapter. This experience can translate to nurses who develop policy in the practice setting. Practice focus can be implemented within the chapter as self-care application and how to bring our knowledge to our patients in clinicals or future practice. Research studies can measure the effectiveness of the chapter in regards to student stress levels and academic improvement. Inclusion is a unique part of our project as the goal is to grow the chapter by inviting nursing students from neighboring nursing schools that cater to all degree levels and demographics. Inclusion of leaders from the American Holistic Nurses Association in mentoring and supporting our initiatives is critical.

Reference: Kreitzer, M.J. (2016). Taking charge of your health and wellbeing. What is wellbeing? University of Minnesota, https://www.takingcharge.csh.umn.edu/what-wellbeing

Funding: American Holistic Nurses Association Institutional Practice Grant, $3,000

Primary Care Hospital Follow-up Phone Calls: A Quality Improvement Project

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Introduction: In a systematic review, hospital follow up care within 30 days of discharge has been shown to decrease 30-day readmission rates in many studies, despite varied interventions (Ballard et al., 2018; Berquist, Linnebur & Fixen, 2020; Gassell et al., 2019; Jackson et al., 2015 and 2016). In 2012, Medicare implemented a requirement for Transitional Care Management (TCM) phone calls to be made within two business days of patient discharge. To comply, primary care offices must identify discharged patients and call within the two-day call window. Studies show that identification of the discharged patients often occurs beyond this window.

Purpose: The purpose of this quality improvement project is to target TCM patients at an urban hospital primary care clinic comparing techniques of RN two-day phone call intervention on TCM phone call, 30-day readmission, TCM face to face in-person visit and TCM billing code rates.

Methods: This quality improvement project will assess the TCM phone call process at an urban hospital outpatient primary care clinic in Washington State. Qualitative interviews will be conducted with clinic nurses responsible for TCM calls to collect data on their TCM practices and perceived facilitators and barriers. Qualitative content analysis will be used to identify patterns and themes. Key outcome metrics from the hospital electronic health record will include 2-day phone call, TCM follow-up face-to face visits, use of TCM billing code and 30-day hospital readmission rates. Metrics will be compared to the TCM practice patterns obtained from nurse interviews. Sample will include all available TCM discharges from list provided by the hospital at an initial sample from September through October 2021. Data will be statistically analyzed using t-tests and Chai square for the most efficient method of identifying TCM call patients based on best quantitative outcome rates in the above four categories, prioritizing phone call rate. Best practice will be reported to nursing administration for implementation. Following implementation, data will be collected at two more 30-day periods in October to December 2021. Results: Data collection and preliminary analysis is projected to be completed by January 1, 2022.

Discussion: Project data is projected to contribute to improved hospital follow-up call rates in the project site, offer transferrable strategies within the regional health system and add to the body of knowledge informing TCM programs. Results may help inform the evolution of state and federal policy.

Social Integration: Concept Analysis

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Background: Social integration is a multidimensional and complex concept that has not been systematically explored or defined as a concept in nursing. In recent decades, social isolation has been increasingly linked to serious health conditions. It is essential for nurses and health care providers to have a clearer concept of social integration in order to better understand a patient's life and provide holistic care.

Purpose: This concept analysis aimed to clarify the concept of social integration in health research and to identify attributes, antecedents, and consequences of the concept of social integration to enhance understanding of the concept and its implications for human health.

Methods: Walker and Avant's framework was used as the methodology for the concept analysis of social integration. A literature search using PubMed, CINAHL, and Embase databases on social integration was conducted with keywords: "integration", "social integration" "social relationships" "social participation" "community integration" "socialization". Studies included in the search were published from 2001 to 2021.

Results: Social integration is a multidimensional and complex process that is affected by individual, social, and environmental factors. Defining attributes are productive activities, social relationships, community engagement, and leisure activities. Depending on the nature and direction of these attributes, social integration is effective in promoting multiple aspects of health (i.e., physical and mental) as well as healthy aging and overall well-being.

Conclusion: The analysis contributes to a comprehensive and fundamental understanding of social integration. Nurses have important roles as a caregiver, helper, mentor, educator and supporter to assist patients to reintegrate or remain integrated in society during and following an illness or injury. This concept analysis may contribute to helping nurses to better understand patients' circumstances that promote or prevent social integration in order to develop interventions. In addition, it can promote communication with patients, family members, and health care providers. Future research is needed to understand the cultural components and context of social integration as well as how world events, such as the COVID-19 pandemic, may influence this concept and its constructs.

Social Networks in Retirement and Assisted Living Communities

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Purpose: The purpose of this review was to summarize relevant research findings related to social networks in retirement and assisted living communities in the last five years.
Background: Research has substantiated that social isolation and loneliness are linked to poorer health, earlier death, and reduced quality of life in older adults. While there has been research focusing on social networks of nursing home residents and even on interventions to decrease loneliness and improve social interactions for older adults in varied settings, there is a gap in research relating to the social networks of older adults in assisted living and retirement communities.
Methods: Three electronic data bases of CINAHL, EBSCOhost, and PubMed were searched for research articles published between January 2015 and March 2020. The search strategy was customized to the database-specific demands of each repository using keywords of friendships, social networks or convoys, and assisted living or retirement community. A total of 475 articles were identified. This was narrowed to 16 articles included for full review after inclusion and exclusion criteria were applied. The Critical Appraisal Checklist for Qualitative Review by the Joanna Briggs Institute was used to gauge research quality. The studies included met between 70-100% of the review criteria and for all studies, the conclusions were appropriate based on the findings of the study.
Results: Following analysis, three themes were identified in the literature: (1) social connections within an assisted living community, (2) social network between residents and their adult children, and (3) influence of physical structure on social networks of residents. There were inconsistent network sizes ranging from 6.3 to 17.87 with common member including family and friends. Family was seen as staple to networks with key roles to help older adults maintain health and to be an advocate. The physical structure of buildings was identified as important to networking as it could either serve to minimize or accentuate interactions. The relationship between peers at the facility and staff were identified as integral to improving the quality of life of residents.
Implications for Practice: This review highlights that there is a need for intentional cultivation of relationships/social networks for residents in assisted living and retirement settings. It is clear there are social ties established within an assisted living community, and there is a connection between strong social networks and better health outcomes. There is also a connection between poor social networks and adverse health outcomes. Nurses can influence patient outcomes and be aware of changes to social networks in assisted living and retirement communities to help decrease loneliness and feelings of social isolation. It is important that nurses actively engage residents in the interaction process and find activities that are of interest and have ease of physical proximity so residents can engage with family, peers, and staff.

Heart Failure Caregivers' Physical and Mental Health: Lens of Social Cognitive Theory

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Purpose: Investigate barriers and facilitators influencing physical and mental health through physical activity (PA) engagement among older family caregivers of persons with heart failure (HF-FCGs).

Significance: Literature shows that most family caregivers (FCGs) are unable to participate in recommended levels of PA due to their caregiving role. Yet, PA is beneficial for FCGs in that it (a) increases the physical strength needed for physical caregiving tasks; (b) reduces physical and psychological distress such as inadequate sleep, anxiety, depression, and stress; and (c) improves caregiving self-efficacy.

Methods: Thirteen HF-FCGs were interviewed between January to April 2021 at the outpatient Advanced Heart Failure Clinic at the University of Colorado Hospital. Inclusion criteria included: ≥ 65 yrs old, live in the same household as HF patient, and provide at least 8 hrs unpaid care for past six months. Using a thematic analysis, three researchers did independent open coding. The social cognitive theory (SCT) framework was used for organizing themes. Throughout the analytical process, the codes, categories, and final themes were refined and defined at the weekly research meetings until final theme consensus.

Results: Aligning with the SCT framework, the themes were classified as *personal cognitive factors*, *behavioral factors,* and *environmental factors.* For ***personal cognitive factors***, participants discussed barriers/facilitators to PA based on their "history", "competence", "motivation", "perceived value", and age-related "health issues." For ***behavioral factors,*** participants discussed "skills and practice", their self-efficacy and expected outcomes for PA were linked to their "goals" that facilitated PA. Even when their loved one was unable to exercise with them, for some HF-FCGs, there was a strong motivation to engage in PA, even if it was a "solo" endeavor. For ***environmental factors***, participants discussed: "*being outside with family"* and "*socializing*" facilitated PA. On the other hand, ***environmental factors*** that were barriers to PA included "bad weather" or the "need to manage their loved one's needs" was more important than their PA. From the barriers, the HF-FCGs' own physical and mental health was typically a second priority to the HF patient's needs. Despite their health taking second priority, the HF-FCG's perceived this as their role as their loved one's family and not a burden. Additionally, participants discussed Covid-19 pandemic challenges to PA. These included: "problems with technology to do PA", lack of "opportunities to exercise outside of the home", and responsibilities such as "homeschooling grandchildren while parents worked". However, despite challenges, the participants described engaging with technology on a more routine basis and now "have more familiarity using technology" in the future for PA.

Implications: Clinicians need to inquire with HF-FCGs about their needs for optimal health and how they participate in health-promoting activities. Given that Covid-19 has accelerated the digital literacy of older adults, the use of digital health tools provides the opportunity for older FCGs to engage more in PA. Further research is necessary with older HF-FCGs to understand what digital health tools and support would be beneficial and acceptable for them.

Reminiscence on Mood, Cognition, and Social Engagement: A Scoping Review

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Purpose: The aim of this scoping review was to examine the extent of the evidence on reminiscence interventions supporting mood, cognition, and social engagement among community-dwelling older adults.
Background: Reminiscence involves the discussion of past experiences with or without other people, usually using tangible prompts such as photographs, music, or archive sound recordings to evoke memories and stimulate conversation. Reminiscence has been used in a variety of forms, including simple reminiscence, life review, life review therapy, and life story work. Reminiscence has shown health benefits on depressed mood, cognition, and communication and interaction among people with dementia. Depressive mood, cognition, and social isolation are common health concerns among community-dwelling older adults. However, there has been little attention paid to synthesizing the evidence of reminiscence for community-residing older adults.
Methods: This scoping review followed the framework by Arksey & O'Malley (2005). We searched PubMed, Cumulative index to Nursing and Allied Health Literature (CINAHL), Web of Science, and Embase. Relevant terms for mood, cognitive function, social engagement, intervention, and community dwelling were used. No historical time limits were set. The search was conducted in July 2021. Inclusion criteria were: 1) people with age of greater or equal to 50 years and residing in community settings; 2) any types of reminiscence therapy; 3) any comparators; 4) mood, cognition, and/or social engagement/social isolation as outcomes; 5) experimental studies including randomized controlled trials (RCT), quasi-experimental studies, and one group intervention; and 6) published in English. Studies with a qualitative or mixed methods evaluation were excluded.
Results: A total of 648 articles were identified from four databases. After excluding 76 duplicates and 1 report was not retrieved, 571 articles were screened using titles and abstracts. Sixty articles were assessed for their eligibility based on full-text and 18 articles were included in this review. Of those 18 studies, only one study (5.6%) was conducted with African Americans and seven studies (38.9%) were RCTs. Reminiscence interventions were mostly delivered as a group (n = 12, 66.7%). The number of sessions varied across studies, a majority of studies provided 6 sessioins (n = 5, 27.8%) or 8 sessions (n = 5, 27.8%). Fifteen studies (83.3%) assessed depressive symptoms as their outcome and 14 studies found statistically significant results of reminiscence on the depressive symptoms at posttest. Only three studies evaluated cognitive function as an outcome and two studies found statistically significant effects on cognitive function. Studies evaluating effects of reminiscence on social engagement or social isolation were not identified.
Conclusions: Reminiscence is a probable effective intervention to improve depressive symptoms among community-residing adults aged 50 and older. Further studies are needed to determine the effectiveness of reminiscence on cognition and social engagement. Community health or public health nurses may use the findings to provide evidence-based practices. There was a dearth of studies conducted with African Americans, even though African Americans have a higher risk of developing Alzheimer's disease compared to other Americans. Future research should include culturally sensitive interventions to improve depressive symptoms, cognition, and social engagement.

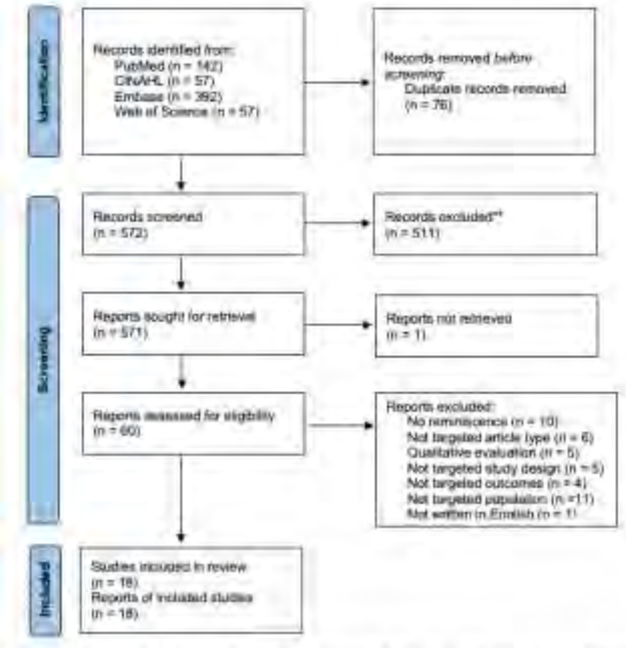

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flowchart

Engaging with Aging: An Emerging Concept of Healthy Aging

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Engaging with Aging is an emerging concept proposed by Carnevali which provides a new lens to understand an active, conscious daily living process of coping with age-related changes (ARCs) taken on by older adults. EWA emphasizes the linkage between ARCs and corresponding behavioral adaptations. As an emerging concept, research on EWA is limited. It is of merit to highlight the novelty and uniqueness of EWA. Therefore, in this study, we aimed to study the similarities and differences of EWA by comparing and contrasting EWA with other already-existing concepts related to “adaptation” in aging.
The first author selected the concepts to compare EWA with based on her expertise in the field of healthy aging. The list of concepts was then submitted to the EWA advisory team for review and approval. The final list of concepts was then systematically studied, and compared with EWA by referencing their corresponding concept analysis papers.
The list of concepts included the following: healthy aging, successful aging, empowerment, thriving, self-efficacy, and resilience. We made a table to display the key attributes of each of these concepts and their relationships with EWA (Table 1). By studying these concepts in-depth, we believe the novelty of EWA is highlighted by 1) EWA focuses on the routine daily living experience of older adults based on their own (insiders’) perspectives, and 2) EWA is a process-oriented concept that focuses on the constant adaptations to ARCs that emerge over the trajectory of aging. We also made a graphic model to define the relationship of EWA with prior concepts (Figure 1). Implications for clinicians and researchers include gaining a better understanding of EWA as well as start using EWA to help guide older adults to identify personalized solutions that fit their capacities.

Palliative Care Referral Time & Healthcare Utilization in Advanced Cancer Diagnosis

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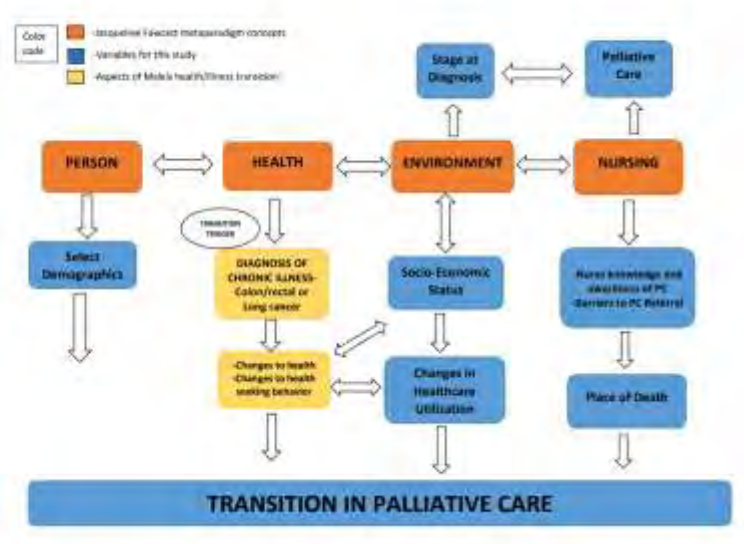
Purpose: To describe the relationship among healthcare utilization, cost of therapy, and outcomes of advanced colon, rectal, and lung cancer patients with and without palliative care referral, and factors that account for these outcomes.
Aims: The aims of this study are to describe *a*) participant demographics, healthcare utilization, Palliative Care Referral (PCR) time, advance directives/POLST completion, place of death, and time between PCR and death, among a sample of advanced stage deceased oncology patients *b*) the relationships between select demographic and other variables *c*) differences in healthcare utilization, PCR time, advance directives/POLST completion, place of death, and time between PCR and death, and time from diagnosis by group (patients with PCR and without PCR) *d*) the amount of variance accounted for by select demographics, healthcare utilization, place of death, time between PCR/hospice enrollment/advance directives/POLST and death, and time from diagnosis by group (patients with PCR and without PCR).
Background: Few studies have examined the impact of Palliative Care Referral time (PCR) on healthcare utilization (HCU) in individuals with advanced stage cancer diagnosis. Extant studies show that cancer patients receive aggressive treatments, even at the end of life. Palliative care is linked to less aggressive cancer treatment; and palliative care interventions applied at the time of advanced cancer diagnosis are more favorable for improving symptom and disease management, and quality of life. Early PCR in advanced cancer has also been shown to decrease HCU, but barriers to discussion and implementation persist. Discussion around palliative care is needed to demystify and destigmatize it's use to improve treatment outcomes.
Conceptual Framework (image attached): This study was guided by the seminal work of Afaf Meleis on Transition and Jacqueline Fawcett Metaparadigms of Nursing to examine variables that facilitate or hinder the transition to palliative care.
Method: Using a descriptive correlational cross-sectional design, data will be extracted retrospectively from the electronic health record (EHR) of patients (N = 160) receiving oncology services from a large urban healthcare system located in southern California, providing acute and sub-acute care across four campuses. *Inclusion Criteria:* living and decedent adults ages 21 years and older, with a diagnosis of advanced stage colon, rectal (colorectal), or lung cancer. Descriptive and inferential statistics will be used for investigative analyses.
Results: Pending data analysis.
Implications for Translation to Practice: Pending analysis, dissemination of study outcomes will inform healthcare providers how early palliative care can impact quality of life, symptom management, and possibly reduce healthcare utilization in advanced cancer. This study will also make visible, avoidable healthcare utilization costs, and improve communication and treatment decision making between providers, nurses, patients, and families. Findings from this study will help elucidate health outcomes by PCR group, consequently facilitating an increased awareness among providers of the true cost of aggressive treatment at the End-of-Life for advanced cancer patients. The overarching goal of this study is to establish a baseline for PCR to facilitate future measurements of improvement.



Exploring Assisted Living Direct Care Workers' Learning and Technology Interests

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Purposes/Aims: Due to the scarcity of knowledge concerning the assisted living home (ALH), direct care worker (DCW), the purpose of this paper is to describe the learning interests of and the technology available to this isolated but growing community of paid care providers that work in ALHs from their perspectives.

Rationale/Conceptual Basis/Background: A growing subset of 4.5 million United States (U.S.) DCWs provide the majority of hands-on care for senior residents living in assisted living (AL) settings. The demand for this "frontline" labor segment continues to increase in response to our aging population, which is outpacing all other age groups. By 2030, 21% of Americans will be 65 years or older. Some estimates suggest that at least 70% of this population will require some form of long-term care.

The ALH is a popular U.S. long-term care setting, is the smallest type of assisted living residence, and requires the employment of DCWs to operate. No longer does the ALH reflect the original, small (2-4 bed) "non-medical," home-like social environment. State licensure varies, but most ALHs are licensed for up to 10 beds. Increasingly, the ALH residents are medically complex and often take multiple medications. The functional and cognitive deficiencies of ALH residents have also increased, complicating their care and often requiring a skilled nursing level.

In response to this aging population, the demand for the ALH DCW continues to grow; however, little is known about this labor segment. In fact, there is an alarming lack of available information about the ALH DCW. The few studies that are available highlight high resident acuity and quality of care issues. Studies that involve larger long-term care environments report that direct care staff are interested in an array of educational topics. The few documented educational offerings that include the DCW working in the ALH are typically in-person events requiring travel. Yet, little is known about what acceptable technology is available to them.

Methods: Boy's human factor framework underpinned Peplau's interpersonal perspective that provided the foundation for the qualitative descriptive methodology used during this exploratory inquiry and guided the preliminary literature reviews and research design. A purposive sample of DCWs were interviewed one-on-one using semi-structured questions. Data analysis included qualitative content analysis from transcribed taped interviews.

Results: Preliminary findings suggest that the ALH DCW has substantial learning interests and needs. Thematic areas of education include medication management and administration, infection control, and behavior management strategies. The most popular technology access device are smartphones.

Implications for Translation to Practice/Further Research/Policy: Specific implications to be determined based on final results. However, this low-wage paid caregiver group needs safety nets similar to other paid caregivers that work in federally mandated health care environments (e.g., home health, nursing homes, and larger assisted living homes). Residents are more medically complex, yet most state training standards (if they exist) focus on basic tasks, and many have not been updated in a long time. This has policy implications.

Funding: Medical Library Association Doctoral Fellowship

Feasibility of the Nostalgia Intervention in Older Adult ADRD Caregivers

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Background: Given the projected increase in older adults with ADRD and associated caregiving needs, healthy aging in informal caregivers is a public health priority. A growing body of theory and empirical research converge on feeling safe as central to intrinsic capacity supporting healthy aging. Many ADRD caregivers experience uncertainty and lack of coherence, discontinuity in roles and relationships, and social isolation which threaten the sense of feeling safe. The threat to feeling safe is met with defense and vigilance, consistent with autonomic imbalance, chronic inflammation, and functional decline. Despite the importance of feeling safe to healthy aging, there has been limited attention to feeling safe as an intervention target in older ADRD caregivers.

Purpose: Memories from the past that engage safety signals are associated with feeling safe in the present, promoting psychological and physiological regulatory capacities. We propose a novel theory-based perspective on feeling safe as a function of autobiographical memory, advancing nostalgia, “a sentimental longing or wistful affection for the past,” as a regulatory resource which cultivates feeling safe and supports healthy aging. The purpose of this research was to evaluate the feasibility of the Nostalgia Intervention in older adult ADRD caregivers.

Methods: Using a single group pre/post-intervention design, we evaluated the feasibility of the Nostalgia Intervention in older ADRD caregivers, operationalized as acceptability, demand, and implementation fidelity. Acceptability reflected satisfaction, effectiveness, and coherence, measured by study-specific self-report (≥ 80%). Participant subjective experience of the Nostalgia Intervention was evaluated using the Narrative Evaluation of Intervention Interview (NEII). Demand reflected retention, with ≥ 70% completing over half of the intervention sessions. Intervention fidelity reflected interventionist training, fidelity in intervention delivery, and participant receipt, with ≥ 80% delivered as planned.

Results: Participants (N=5) were aged 68-85, the majority were female, caring for a spouse, and non-Hispanic white. Acceptability as satisfaction, effectiveness, and coherence was evaluated as ≥ 80%. Qualitative evaluation (NEII) supported feeling safe in nostalgic memories of warmth and comfort. Participant retention was 100%. Fidelity in interventionist training, intervention delivery, and participant receipt was evaluated as ≥ 80%.

Conclusions: The Nostalgia Intervention is feasible to implement and is recommended for further testing in older ADRD caregivers. In contrast to cognitive-behavioral, reappraisal, or coping interventions, which address the “why” of threat to feeling safe, nostalgia provides an approach focused on the experiential comforting “what” of feeling safe, supporting healthy aging in older ADRD caregivers.

An Inclusive Approach to Palliative Care Complexity: Centering Clinician Experience

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Palliative care is multidisciplinary, whole person-centered care aimed toward minimizing suffering and maximizing quality of life for those with serious illness. Estimates of burnout among palliative care clinicians are reported to be as high as 40%, leading to clinician turnover, workforce shortages, and medical errors which risk patient safety. Rising rates of burnout point to the failure of the healthcare system to adequately support clinician wellness, calling for a contextual understanding of system challenges such as workforce and staffing shortages, and inadequate funding for palliative care programs. The National Academy of Medicine's ([NAM], 2019) *Systems Model of Clinician Burnout and Professional Well-Being* highlights the importance of centering the clinician in an analysis of systems (*Figure 1*). Informed by the theory of *complex adaptive systems*, the NAM (2019) model highlights multiple, interconnected, and interacting levels of systems pertinent to healthcare (*Figure 2*), namely: *frontline care delivery* (e.g., clinicians), *healthcare organization* (e.g., hospitals), *and external environment* (e.g., laws, policy). While the model illustrates important relationships between the clinician and the healthcare organization and external environment, its explicit focus on the outcome of burnout is problematic because burnout is a self-limiting starting point of inquiry into the nature of a system. Alternatively, an "upstream" focus would center clinicians and the spectrum of their lived experience. This shift opens potential for understanding system-generated conditions as they are lived and experienced by clinicians, not as they are made to fit existing (and potentially limiting) constructs. Attention to clinicians' interactions with surrounding systems outlines a pathway for understanding nuanced complexity in palliative care.

Characterizing the complexity of palliative care has potential to inform activities to counter structural challenges in palliative care, perhaps by influencing patient case-mix classifications, resource allocation, and the development of clinical tools such as those for triage. To date, models and research efforts have failed to explore relationships and interactions among clinicians, colleagues, and superiors in-depth. With an understanding that clinician experiences influence quality of care for patients, careful attention to clinician experiences potentiates a more robust understanding of palliative care complexity at all levels, including at the level of the individual patient.

Future work will engage constructivist grounded theory methodology to center clinician narratives of palliative care work to illuminate systems-level characteristics as they are experienced first-hand in clinical care. This approach represents a process in which examining lived experience is a kind of diagnostic tool to understand systems-level and structural characteristics. Insights derived from analysis of qualitative data from palliative care clinicians can inform theoretical frameworks on palliative care complexity and create launch pads for innovative intervention work aimed toward structural change.

Figure 1. A Systems Model of Clinician Burnout and Professional Well-Being

Figure 2. *The Three Levels of the Systems Model of Clinician Burnout and Professional Well-Being*

Expanding the Health Belief Model for Research of Inpatient Fall Risk Among Older Adults

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Aim: Explore if concepts within the Expanded Health Belief Model (HBM) framework emerge in older adults' descriptions of their lived experience of being at risk for falling in the hospital.

Background: Theory-driven research is essential in nursing, thus determining a theoretical framework's applicability to the study population and the phenomenon of interest is important for further research. The HBM has been extensively applied to fall prevention research globally. However, the concepts within the HBM may be less applicable to the underlying health beliefs and age-related behaviors associated with fall risk among older adults. Thus, the HBM was expanded with concepts that specifically apply to older adults at risk for falling in the hospital.

Methods: The HBM concepts include *perceived susceptibility*, *severity*, *benefits*, *barriers, cues to action*, and *self-efficacy*. Self-efficacy is an individual's perceived ability to perform an intended action. Since some hospitalized adults do not perceive themselves as at risk for falling in the hospital, self-efficacy was not included in the theoretical framework. The HBM was expanded with the concepts of *embarrassment*, *independence*, *fear of falling*, *dignity*, and *positivity effect*. These concepts are associated with aging and fall risk in older adults. An interpretive phenomenological study of the lived experience of being at risk for falling in the hospital was conducted among older adults (N=9) to determine if the concepts in the Expanded HBM were applicable. Participants were interviewed twice after hospital discharge.

Results: The interpretive analysis of the transcripts revealed that the Expanded HBM was applicable for exploring the phenomenon. The participants' perceived susceptibility for falls in the hospital was due to their perceived balance problems that in turn posed a cue to action. Most of the participants had experienced injurious falls, and they perceived the severity of the consequences from a fall to be potentially severe. The participants managed their balance problems in the hospital by planning their mobilization, and the perceived benefits of this was preventing falls. The participants' perceived barriers in preventing falls included using a walker which was embarrassing and receiving assistance from nursing staff that led to feeling loss of independence. Some participants experienced fear of falling. Relationships with nursing staff influenced how the participants' were able to maintain their dignity. Self-efficacy proved to be a central concept. The participants did not consider themselves at risk for falling in the hospital because they had high self-efficacy in preventing themselves from falling. Thus, the concept of self-efficacy was added back into the Expanded HBM. Positivity effect was not immediately evident in the participants' experiences. However, positivity effect may have influenced the participants' self-efficacy and their strong belief that they would not fall in the hospital.

Implications: The concept of self-efficacy may be essential for fall prevention in hospitalized older adults and warrants further exploration. The concept of positivity effect may be significant as well and is a topic for further investigation. The Expanded HBM remains broad and is appropriate to guide future nursing research to develop fall prevention interventions for hospitalized older adults.

Funding: Frederick Lange Memorial Endowment. Dissertation Award. University of Arizona, College of Nursing and the University of Arizona Foundation.

Postoperative Delirium Risk Factors in Older Adult Patients with a Hip Fracture Surgery

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Purpose: The purpose of this study is to identify risk factors associated with postoperative delirium and explore clinical outcomes in older adult patients who experienced a surgical procedure for the hip fracture.

Background: Delirium has an adverse impact on patients, their families, and healthcare organizations. The prevalence of delirium is about 30% in hospitalized patients and 37% among postoperative patients. Older adult patients are at increased risk for postoperative delirium, with individuals with a hip fracture at the highest risk. Patients who experience a postoperative delirium are at increased risk for adverse events or clinical outcomes, such as infection, readmission, nursing home placement, or long-term cognitive impairment. The mortality rate is higher among patients who develop postoperative delirium. In the current literature, findings of factors contributing to postoperative delirium are inconsistent and even controversial. Further research is needed to identify postoperative delirium risk factors and their clinical impact.

Methods: This is a descriptive, correlational study. The 2019 American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) Hip Fracture Targeted Procedure file has been retrieved and merged with the ACS-NSQIP 2019 data file. Patients aged 65 and older with a hip fracture who had a surgical procedure in 2019 are included in the study. The outcome measure is the occurrence of postoperative delirium identified in the data file. Potential predictor variables include sociodemographic characteristics, preoperative health conditions, laboratory values, surgical factors, and the American Society of Anesthesiologists (ASA) classification score.

Assessment of Findings: Descriptive analysis will be conducted to examine the characteristics of the sample. Bivariate relationships between postoperative delirium and predicator variables will be assessed using independent t-tests, Pearson Chi-square, and Fisher exact tests, as appropriate. Multiple logistic regression will be conducted to identify independent risk factors for postoperative delirium. Clinical outcomes such as surgical site infection, 30-day readmission and mortality, and discharge placement will also be explored.

Implications: Using the national ACS-NSQIP 2019 data file, this study will identify risk factors associated with postoperative delirium in older adult hip fracture patients. By identifying significant risk factors, nurses may develop, implement and improve postoperative delirium prevention programs based on the identified risk factors.

Implementing Task Sharing of Tele-Mental Interventions in Primary Care

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Background: The prevalence of depressive symptoms in older adults range from 2.1-7.2%. In older adults, depressive symptoms are linked with worse morbidity and mortality, high health costs, and lower quality of life. Primary care in the United States of America (USA) has been the focal point for providing mental health services. However, even though many mental health conditions can be treated and managed in the primary care setting, research has shown that the quality and outcomes of mental health care in primary care without integrated mental services are sub-optimal. In the mental health field, Tele-Mental Health (TMH) is the broad terminology encompassing the delivery of mental health services from a distance. The literature on TMH and Telehealth shows a wide range of applications, providers, and settings. The promise of telehealth is better access to quality health care at lower costs. Many studies have shown the feasibility, acceptance, and satisfaction with TMH, and studies have shown better medication adherence with TMH. However, with the limited number of mental health specialists, the idea to utilize the implementation strategy of task sharing of TMH interventions has been gaining acceptance in the US. However, in studies about mental health interventions, often the task shifting/task sharing approach was used but not explicitly called out as a strategy. This indicates that task shifting/task sharing, itself, needs to have formative and summative assessment of its effectiveness as an implementation strategy in combination with the evidence-based intervention especially in the US primary care context.

Aims: The aims of this study were to examine the acceptability, appropriateness, feasibility from an individual and team level, and to investigate how health care professional perceive their organization's readiness to implement task sharing of TMH interventions.

Methods: In 2020, an explanatory sequential mixed-methods study occurred to investigate task sharing of synchronous Tele-Mental Health (TMH). The study began with a nation-wide cross-sectional survey followed by interviews of health care providers. This project will be a secondary data analysis of the quantitative and qualitative portion of the explanatory sequential mixed-methods study. Quantitative data will be analyzed with descriptive statistics and chi-squared analysis to assess for differences in survey results by certain demographic characteristics. The qualitative data will be analyzed using Consolidated Framework for Implementation Research (CFIR).

Results: Quantitative and qualitative data are currently under analysis and results are pending.

Impact: Without information about how best to implement, integrate and sustain task sharing of TMH interventions, primary care systems will continue to provide sub-optimal care to their patients with mental health conditions like depressive symptoms in older adults. The question also remains on what the impact of task sharing have on teams, individuals within the team and what factors and characteristics of teams and individuals will impact implementation of task sharing strategy in the implementation of TMH interventions in integrated or collaborative care models in primary care. Resolving this issue could potentially improve care to older adults with depression or other forms of mental illness.

Fall Risk Assessment and Intervention to Reduce Fall-Related Injuries in Older Adults

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Purpose: The project aims to evaluate fall risk assessment and exercise intervention to reduce fall-related injuries and hospitalization in older adults.

Background: Accidental falls have become a major problem among older adults which increases morbidity, independence, mortality as well as healthcare costs. Community-based outpatient fall prevention programs are important. Older adults are advised to do regular moderate-intensity aerobic physical activity at least 150 minutes per week or 75 minutes of vigorous-intensity activity. The National Council on Aging also provides a list of evidence-based exercise programs for fall prevention in older adults. Those exercise interventions can prevent and reduce fall incidents.

Brief Description: This evidence-based practice is guided by the integrated Promoting Action on Research Implementation in Health Services (i-PARIHS) model. The framework provides a conceptual map that contains the core constructs of facilitation, innovation, context, and recipients which increase the opportunities of successful implementation processes.

Methods: In this pilot setting, the sample consisted of 31 adults aged 65 and older who had an annual wellness visit in Bermuda Dunes between August 16, 2021 and August 26, 2021. The Centers for Disease Control and Prevention's Stopping Elderly Accidents, Deaths, and Injuries (STEADI) toolkit was used for fall assessment. The patients reported their physical activities and exercises weekly using a provided exercise log for 12 weeks. The compared data between the low-risk and high-risk scores used descriptive statistics.

Implications for practice: The implication of this practice resulted in the early identification of fall risk factors and development of individualized care plans for fall prevention in a primary care setting. The project also supports the Older American Act and Affordable Care Act in evidence-based health promotion and diseases prevention for older adults

Evaluation: Project outcomes included a 10% reduction in fall-related injuries and a 5% reduction in fall-related hospitalizations. Older adults at high fall risk were likely to have fall-related injuries and hospitalization. The study group with routine recommended physical activities was more likely to have less fall-related injuries and hospitalization.

Findings/Outcomes: The initial results indicated that older adults aged 66-83 (51.6% female, 48.4% male) expressed their desire to participate in the project. The range of body mass index was from 19.5- 35.6 of which the average was 26.28. Most older adults exercised regularly, approximately 51 minutes a day. Their normal average Time-Up & Go and 30-Second Chair Stand Tests were 7.7 seconds and 12.5 times respectively. Five patients (16%) were at high risk of falling based on the 12-question tool. Three patients (9.6%) reported fall incidents in the past year. The most common complaint issue was neuropathy (10%). The typical physical activities included walking, swimming, stretching, water aerobics, treadmill, Zumba, weights, yoga, housework, and tennis. The participants will submit their physical activity log every week for 12 weeks. The final analysis and results are in progress.

Conclusion: The STEADI assessment tool can predict fall risk and provide a customized fall intervention plan with exercise and physical activity to prevent or reduce fall-related injuries and hospitalization.

Exercise and Behavioral Management for Dementia Care: Systematic Review

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Purposes: This systematic review of the published literature focuses on the effects of home-based, dyadic exercise and behavioral management on physical function of dementia care dyads, behavioral and psychological symptoms of dementia (BPSD) in people with dementia (PWD), and family caregivers' (FCs') response to BPSD.

Background: Dementia is characterized by an overall decline in cognitive function severe enough to reduce a person's physical function. PWD often experience a broad range of BPSD, such as aggressiveness and agitation. The decline in cognitive and physical functions significantly impacts the quality of life of dementia care dyads. Caring for PWD at home is particularly demanding and stressful due to the degree of physical dependence, prevalence of behavioral disturbance, emotional stress, lack of experience in managing BPSD, and limited time for self-care. As there is no cure for dementia, non-pharmacological interventions, such as exercise and behavioral management, are promising methods and highly recommended for improving physical and behavioral functions in PWD and reducing burden among FCs. Research suggests that BPSD should be managed with non-pharmacological approaches, as the frequent use of antipsychotics has shown limited efficacy and serious adverse effects. However, there is minimal exploration on the effects of home-based exercise and behavioral management designed with a dyadic approach for PWD and their FCs. Previous systematic reviews have been limited to long-term or hospital care settings and the impact of interventions on FCs is overlooked. The majority of the studies on behavioral management were published five or more years ago. It is important to review more recently published studies to provide updated knowledge on this topic.

Methods: A Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) 2020 checklist is guiding this systematic review. A search of PubMed, EMBASE, Web of Science, and PsycINFO databases (2011-2021) using keywords: "Dementia", "Family caregivers", "Physical exercise", "Behavioral management techniques", and "Home" is being conducted, with identified studies screened for reliable full-text articles that address the purpose of current review.

Results: Various home-based exercise and behavioral management for dementia care dyads are being explored with summaries on the effectiveness of the interventions on the improving care dyads' physical function, reducing frequency of behavioral problems in PWD, and reducing FC burden to manage BPSD. Preliminary results of this review have shown that home-based exercise for PWD effectively delays cognitive decline, improves BPSD, and reduces caregiver's burden. Home-based behavioral management effectively reduced BPSD, especially severe agitation in PWD. The current review will answer whether there is evidence to support the effectiveness of combined home-based, dyadic exercise and behavioral management in improving care dyads' physical function and reducing behavioral problems in PWD as well as family caregiver burden in managing BPSD.

Future Implications: As most PWD live in their own homes and need support and care from informal caregivers, more home-based interventions designed with a dyadic approach aim to improve the health outcomes of care dyads are needed. This current review contributes to future development and implementation of interventions for dementia care dyads at home.

Dyadic Sleep Association between Persons with Dementia and Family Caregivers

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Background: The brain damage deterioration associated with dementia can affect disturbances in nighttime behavior and sleep quality. Approximately 60-70% of persons with dementia (PWD) have trouble falling/staying asleep, excessive daytime sleepiness or/and fatigue. Caregivers' sleep is often affected by the demands of PWD at night such as frequent awakening. Caregivers' sleep problems are significantly associated with caregiver stress and depression, resulting in sending PWDs to long-term care facilities. Given the interchangeable effect of dyadic sleep, identifying the association of sleep parameters (e.g., sleep efficiency, total sleep hours) for dyads is very important to improve sleep quality. Wearable Internet of Things (WIoT) technology, a smartring-smartphone-cloud system, has become increasingly accepted as a useful tool to study sleep quality. WIoT is an objective measure that compensates the lack of self-reported sleep outcomes. Objective data measured by WIOT are very critical to evaluate dyadic sleep quality. Further, there is a dearth of information, which is critical for informing the next set of intervention approaches on sleep for dyads.

The specific aims are to: 1) Describe sleep parameters [i.e., sleep efficiency, total sleep hours, number of awakenings, Rapid Eye Movement, deep/light sleep, resting heart rate, heart rate variability (HRV)] of dyads (PWD and caregiver) for 4 weeks measured by WIOT and valid instruments; **2)** Examine the associations of dyadic sleep outcomes; and **3)** Understand perceived sleep relationships for dyads by interviewing caregivers and using sleep diary.

Methods: This is a one group observational study using mixed-methods to explore sleep associations of dyads recruited in California. The study measures include: 1) sleep parameters measured by WIoT technology, 2) self-reported survey on sleep quality using Pittsburgh Sleep Quality Index (ranging from 0 to 21, greater than 6 indicating sleep disturbance), 3) dyad sleep diaries reported by caregivers, and 4) perceived experiences of dyadic sleep relationships by interviewing caregivers. Caregivers and PWDs are asked to wear a smartring for 4 weeks, respectively.

Results: Data collection is ongoing. We have recruited 2 pairs of dyads who provided study consent. The two dyads showed acceptability of WIoT device and completed all surveys and interviews. Caregiver sleep outcomes demonstrated the role of stress (measured through HRV) in affecting sleep quality (mean HRV=22, PSQI=11). One PWD's sleep quality (PSQI =5) was decreased compared to baseline (PSQI=1). Findings from interviews and sleep diaries demonstrated that sleep interdependent relationship between PWDs and caregivers. Caregivers reported that their sleep was interrupted by PWD's behavioral problems at night including multiple awakenings, bed soiling, and excessive movement on bed. Caregivers expressed worries and concerns which affected their sleep quality such as difficulty in falling asleep. More results will be presented at the conference.

Conclusion: Using mixed methods including qualitative and quantitative approaches using WIOT can help better understand the dyad sleep associations. Dyadic approach will demonstrate interdependence between PWD and caregiver sleep. The way in dyadic sleep appraisal has the potential to guide dyadic sleep management and may help develop effective sleep interventions.

Funding: University of California, Irvine, School of Nursing

Effect of Ultra-Processed and Unprocessed Foods on Taste and Clinical Parameters

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Aims: This study aimed to (i) explore differences in taste preference and detection thresholds following ultra-processed and unprocessed diets and (ii) examine associations of taste measures with blood pressure and anthropometric measures following these two diets.

Background: Extended consumption of ultra-processed foods may impact taste sensitivity and preferences. Taste is a major determinant of food choice, which in turn can impact energy balance, nutritional status, and ultimately health. Thus, it is crucial to unravel the effect of diet on taste and how taste impacts health parameters, including body weight and anthropometric measures.

Methods: In a randomized, crossover study, participants received an ultra-processed or unprocessed diet for two-weeks, followed by two-weeks of the alternate diet. Taste preference and detection thresholds were quantified through psychophysical tests at the end of each diet. Paired *t*-tests were used to compare taste preference and detection thresholds, BMI, body weight, and blood pressure measures between individuals receiving ultra-processed and unprocessed foods. Spearman correlations and linear mixed models with repeated measures were performed to assess the associations between taste measures, and BMI, body weight, and blood pressure following two-weeks of an ultra-processed or unprocessed diet.

Results: Twenty weight-stable adults (mean age 31.2±7.31 years; BMIs above 18.5 kg/m^2) participated in this study. No significant differences in salt (1.6±0.45 mM vs 1.7±0.54 mM; p=0.997) and sweet taste preferences (12.8±8.20 mM vs 13.7±7.14 mM; p=0.541) or salt (10.7±14.80 mM vs 10.7±11.17 mM; p=0.997) and sweet detection thresholds (6.9±5.55 mM vs 7.0±6.29 mM; p=0.946) were found between the ultra-processed and unprocessed diets. However, positive associations were found between salt taste preference and systolic blood pressure (r=0.588; p=0.008), body weight (r=0.474, p=0.040), and BMI (r=0.503; p=0.028) following consumption of the ultra-processed diet.

Conclusions and Implications: We did not identify any significant associations between salt or sweet taste preference and sensitivity and consumption of ultra-processed foods compared to unprocessed foods. However, two-weeks of an ultra-processed diet were sufficient to observe a correlation between increased salt-taste preference, and increased blood pressure. This may indicate that salt-preference following the consumption of ultra-processed foods can impact blood pressure regulation. Furthermore, ultra-processed foods were associated with increased body weight and BMI. Together, this suggests that diet, including the extent of processing that foods undergo, may impact health. Nutrition plays an integral role in disease prevention, recovery from illness, and health outcomes. As nurses play a crucial role in patient education, better understanding the role of diet, including food processing, is critical to provide guidance and empower patients to make healthy food choices.

Further Research: This is the first inpatient clinical study to examine the effect of ultra-processed foods on taste, blood pressure, and anthropometric measures. Further research is needed to better understand this relationship; we will build upon this study in a larger (40 participants) and longer study (8-week duration). In addition, using the same randomized cross-over study design we have also collected data to examine the effect of dietary interventions (i.e., low-car and low-fat diets) on taste and clinical parameters.

HEALTH PROMOTION/ILLNESS PREVENTION

Increasing Provider Confidence in COVID-19 Vaccine Conversations

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Purposes: The purpose of the project is to increase provider confidence levels in having vaccine conversations with college-age students regarding the COVID-19 vaccine. A secondary purpose is to support providers with motivational interviewing tools to utilize in these conversations and to provide a strong recommendation for vaccination.
Rationale/Background: College-age students have historically low vaccine uptake rates, including for the COVID-19 vaccine. Healthcare providers are considered the most trusted source of information for this population and a recommendation from a healthcare provider is the top influencing factor for vaccine uptake. The history of low vaccination rates in college-age students, along with the trusted influence of healthcare providers, highlights the importance of vaccine conversations.
Methods: The participants for this project were healthcare providers at a college health services clinic in the Southwestern United States. An educational intervention was provided in the form of a 20-minute presentation. Topics included were: barriers to vaccination, information to share about COVID-19 and the COVID-19 vaccines, addressing misinformation, providing a strong recommendation, and motivational interviewing techniques. Before the presentation, a short pre-survey was taken by participants. Several days after the presentation, a post-survey was distributed to participants. A final post-survey will be distributed at the six-week post-presentation mark. At that time, data collection will be complete. Surveys focus on confidence levels and the use of motivational interviewing tools in their practice. The theoretical framework utilized was the Health Belief Model, because its three main parts, modifying factors, individual beliefs, and actions align with the aim of the project.
Assessment of Findings: At the time of abstract submission, data collection is in process. It is anticipated that all data will be collected by November 2021, with data analysis shortly following. The findings/outcomes achieved will be included in the poster presentation.
Conclusions: Based on the assessment of findings, it is anticipated that the next steps would include expanding the educational intervention to other healthcare staff within the organization. This expansion would consist of medical assistants and registered nurses as they also have conversations with patients regarding vaccination status. Motivational interviewing techniques are well documented in addiction recovery but are newer when addressing vaccine hesitancy. A recommendation for future research would be to continue evaluating the use of motivational interviewing tools in vaccine-hesitant patients and share any data supporting the implementation of motivational interviewing tools within the primary care setting.
Implications for Nursing Practice: The use of motivational interviewing techniques for vaccine conversations is a practice that is applicable for all nursing roles. Vaccine conversations should be happening with every patient interaction and as a part of an ongoing conversation and relationship development between provider and patient. Providing education and a strong recommendation for vaccination is an important part of the nursing role. While the focus of this project was related to the COVID-19 vaccine, the lessons learned can be translated to all vaccines and all populations.

Infection Control in Congregate Shelters Following a Natural Disaster

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Background: Infection control is at the forefront of nurse's minds but is of particular importance immediately following a natural disaster such as hurricanes, tornados, earthquakes, floods and wildfires that often displace people from their homes. Congregate shelters are temporary dwellings that provide food, water and shelter under emergent circumstances. Infection risk increases when individuals seek shelter in crowded environments.

Following a natural disaster, nurses act as advocates for infection prevention and control. This includes awareness of effective interventions to prevent and manage infection. Despite existing research on infection rates in the general population, there is a gap in the literature regarding appropriate infection prevention for shelter residents following a natural disaster.

Purpose: The purpose of this project was to review current literature regarding the spread of common infections and to provide recommendations to nurses for preventing infections in congregate shelters following a natural disaster.

Method: Initial searches included the databases MEDLINE and CINAHL. Search terms included *infection, disease, infection control, transmission, epidemiology, shelter, respiratory infections, droplet, airflow, SARS-CoV-2, COVID-19, pandemic, influenza, prevention, surveillance, crowding, hand hygiene, masks, disaster, hurricane, tornado, flood, tsunami* and *earthquake*. Inclusion criteria included articles published in English since 2007. The inclusion timeline was extended to include articles regarding Hurricane Katrina that were rich with information provided following this disaster. 273 articles were found, and 240 were excluded after reading abstracts and determining them to not be applicable because of duplication, a narrow population of interest, such as pregnancy, or a low disease prevalence in the United States. A total of 33 articles were reviewed.

Results: A symptom check, including temperature, upon entering a shelter should occur. Those who have a fever, cough, open wounds, rashes or sores, or vomiting or diarrhea should be isolated from other residents. The Centers for Disease Control and Prevention (CDC) recommends separating symptomatic individuals by at least 3-6 feet. The CDC also recommends isolating persons with symptoms in individual rooms if possible, or in a designated area with other persons with similar symptoms if individual rooms are not available. Masks should be donned by all who enter a group shelter.

A designated latrine should be available to each group of patients with similar symptoms. Latrines should be located least 30 meters away from food and water preparation, as well as showering/bathing facilities. With symptoms of mosquito-borne illnesses, isolation of symptomatic individuals is necessary until a specific diagnosis is confirmed. Proper handwashing and the use of hand sanitizers is essential.

Conclusion: Nurses are key to infection prevention. The implementation of these measures will reduce the transmission of infection in shelters following a natural disaster.

Nursing Students' Knowledge and Attitudes about COVID-19 Vaccine

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Purposes/Aims: As future healthcare providers, undergraduate nursing students will be a part of the healthcare workforce entrusted with educating patients and providing health recommendations including vaccinations. The purpose of this study is to describe the nursing students' knowledge and attitudes about the COVID-19 vaccine.

Background: Immunization is one of the most successful public health interventions in controlling and eradicating infectious diseases. However, with the emergence of the novel coronavirus, there is an associated widespread COVID-19 vaccine hesitancy among the general public including healthcare workers. Undergraduate nursing students as future healthcare professionals are expected to be knowledgeable about the disease, be aware of the risks and benefits if a vaccine is available for a particular illness and communicate this information to their patients in the best way possible. The literature has reported a strong relationship between the knowledge and attitudes of healthcare providers about vaccines and their vaccine recommendations for their patients.

Methods: A descriptive, cross-sectional approach was utilized using an online survey. The survey assessed for knowledge about the coronavirus and attitudes toward the COVID-19 vaccine including vaccination status and reasons for getting vaccinated. The survey was administered anonymously to undergraduate nursing students enrolled at a state university in Southern California using Google Forms for online delivery. The online survey was conducted in Spring 2021 for three weeks. The study was approved by the university's Institutional Review Board.

Results: A total of 92 pre-licensure nursing students responded to the survey. Nearly all respondents (96%) are knowledgeable about the COVID-19 symptoms, transmission, prevention, and treatment. Eighty-five percent (85%) perceived COVID-19 as a danger to their health with 68% worried about getting infected suggesting their motivation for vaccine uptake. A large portion of the respondents (88%) were vaccinated while 6% would wait to see the effects of the vaccine on others before getting it. The media reports did not influence the respondents' (53%) decision to get vaccinated. About vaccine safety, 92% of the respondents reported that the vaccine is safe and would encourage their friends and family to get vaccinated. Most of all, 95% of participants believe that the vaccine will help to getting back to normal (pre-COVID times). Traditional remedies to protect oneself and building natural immunity through exposure were preferred by 3% of respondents.

Implications for Practice: An understanding of the nursing students' knowledge about COVID 19, the current vaccine sentiment, and potential determinants of their behavior are critical for planning effective health communications to encourage uptake and understanding of the vaccine's role in individual's well-being and the public health in general. Most of all, it may help foster conversations with one another and curtail vaccine hesitancy.

Nutrition Education for First-Year College Students

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Background: Young adults attending their first year of college gain an average of 4-9lbs, or at least two times the average annual weight gain of about 2lbs for a typical American adult. About two-thirds of the total students reported an increase in weight over their first year in college, with an average gain of 7.5lbs for those reporting a weight increase.
Purpose: The Nutritional Education Program for First-Year College Students is based on evidence-based guidance and strategies to improve first-year students' nutritional knowledge and provides tools for building a foundation of life-long healthy dietary choices. This project aims to build self-efficacy for healthy eating patterns and prevent obesity in these students based on the Health Belief Model at the critical transition period between home and independence.
Method: Intervention and data collection will occur between October 2021 and February 2022. A minimum of 35 participants will be recruited from a pool of first-year students enrolled in a private, residential university in Western Washington. The intervention includes a 4-hour, synchronous, online small group course consisting of nutritional information and strategies based on the Healthy Eating Plate developed by Harvard University. Four weekly follow-ups 1-hour synchronous, online group meeting sessions will follow the initial course to discuss goal setting and supplemental resources. Intervention effect will be measured by comparing pre and post results on the Nutritional Self-Efficacy Survey administered online via Qualtrics. Categorical data (Demographics) will be summarized using descriptive and non-parametric operations. Continuous data (survey scales) will be analyzed using t-tests. Qualitative content analysis will be employed to identify patterns and themes (if any) from field notes and survey responses.
Implication: Completion of data collection and preliminary analysis is projected for March 2022. Findings from this project will add to the body of knowledge informing health promotion programs for entry-level college students, including design and delivery modalities for nutrition-focused programs. It is anticipated that the findings will directly influence the health-promotion program mix at the site university and may yield strategies transferable to other settings.

Pharmacy Delivery System Pilot for the Chronically Unhoused: A Prescription Program

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Purposes/Aims: 1) To pilot an intervention supporting prescription medication access and use among a chronically unhoused, urban population via a medication refill program (*Operation Safer Ground*). 2) To explore the feasibility of partnering with local pharmacies to support medication access among this population.

Rationale Background: The chronically unhoused experience health disparities requiring access to a medical home, and local pharmacy, supporting their use of prescribed medications. A significant challenge to regimen adherence are barriers to medication pick-up (initial or refills) associated with transferring the prescription to a pharmacy that is both local and amenable to contacting the individual when the medications are ready for pick-up. A lack of transportation to pharmacies outside of their immediate neighborhoods, and reluctance to enter highly visible, unfamiliar, public spaces can prevent access to needed medications. Additionally, as many as 30% suffer from a chronic mental illness, which adds burden to public interactions and overuse of acute care services such as the high use of emergency departments. The chronically unhoused, especially those with a dual diagnosis (co-occurring substance use/abuse) may exhibit decreased activities of daily living, and social contact, and an inability to deal with everyday responsibilities, including medication pick-up. To address these barriers, an intervention that supports medication access in this population must address these challenges, while promoting collaboration between providers and pharmacies to close the gap.

Brief Description of the Undertaking/Best Practice: Chronically unhoused adult residents (n=69) living at a hotel site, supported by Operation Safer Ground, in an urban center in the Western States participated in this pilot program and feasibility study. An intake form was completed by nursing staff. Using these data, participants' prescription regimen/prescription(s) were transferred to a pharmacy close to the living site (within 2 blocks). Residents were notified by the pharmacy when medication(s) were ready for pick up. This intervention was informed by the Transactional Cost Model; TCM posits that human interactions require a "cost" (mental, emotional etc.) and individuals who are limited in internal resources may restrict their interactions with others as a self-protective and energy-conserving mechanism.

Assessment of Findings/Outcomes Achieved: Of the initial 69 contacted, 24 agreed to participate. The results were multilayered, including ZERO utilization of emergency services for chronic illness issues; we also saw an increase in refills of prescription medications being picked up at the pharmacy. Improved medication adherence due to the pharmacy delivery system residents were able to become more self-sufficient as evidenced by increased ability to apply and interview for permanent housing. Participants stated this new-found independence made them feel "good" and "strong".

Conclusions: Participants benefitted from this program in a number of ways, and valuable information was gained by the project team. Based on these preliminary findings, our team anticipates an expansion of this pharmacy delivery system in a larger population of chronically unhoused individuals. A greater awareness of "low-tech" interventions, such as this program that augments existing services, represents a novel, and promising strategy for improving medication access in communities disproportionately impacted by the pandemic (such as the unhoused).

Refugees Act and Communicate for Health (REACH)

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Forced migration create a burden and disrupt health systems in host countries. Refugees face challenges of safe living conditions, access to health care, education, employment opportunities, and social well-being. Several studies documented the challenges and adversities of the refugees and recommended solutions, but none based on the voices and aspirations of the refugee especially the youth.

There is a need to objectively document the challenges and adversities as perceived by the refugee youth and accordingly design innovative technologies to improve healthcare services for refugees.

The **aims** of this study are to explore knowledge, behaviors and access of Syrian refugees (SR) and local youth to healthcare services in Lebanon that hosts the highest number of refugees per capita; and to determine the current trends on the needs for the use of digital health technologies among refugee youth for health promotion in humanitarian settings.

Methods: this is Community-based Participatory Action Research using mixed method of quantitative cross-sectional survey, photovoice with focus group discussion, and individual interviews. Data collection was done after obtaining Institutional Review Board approval. It included meeting with the stakeholders in Lebanon and engaging them, followed by a survey administered to 300 SR youth aged 15-24, Photovoice and related focus group discussion with 20 SR and local youth, and in-depth interviews with 20 policy makers and service providers.

Data analysis for the survey included descriptive statistics, bivariate and multivariate analysis using statistical software (SPSS). Qualitative content analysis is used for the in-depth interviews and the photovoice focus group discussions.

Results: only results of the photovoice focus group discussions will be presented. The findings showed that the SR and local youth share similar concerns reflecting the realities of their unhealthy environments such as Poverty and clothing, Food safety, Personal safety, Waste and Water pollution. However, the SR and local youth perspectives may differ on the meanings attributed to these concerns. Some of the photos their cameras captured have different focus.

This study has **implications** for engaging the youth in creating healthcare access and healthy spaces. Nurses play a pivotal role in engaging the youth in designing community interventions conducive to healthy living.

Screening People Experiencing Homelessness for Adverse Childhood Events (ACE's)

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Purpose: The purpose of this study is to identify patients with high Adverse Childhood Events scores (ACE's) at Father Joe's Village, a medical clinic that serves the homeless population of San Diego, and provide interventions as necessary.
Method: Patients who utilized Father Joe's Village as their primary provider and were over the age of 18, were given the ACE screening tool during their visit. Those who had scores of 4 or higher were connected to internal resources at the facility such as psychiatry, behavior health counselors, alcohol and drug counselors, case managers, or social work. ACE's has been validated in many populations and serves as a reliable tool as well.
Results: Pending. Sample size is expected to be 200 patients by December 2021.
Conclusion: ACEs screening tool is proven to help identify those at risk for chronic toxic stress syndrome. As patients for FJV already have access to essential resources such as social workers, psychiatrists, alcohol and drug counselors, case managers, etc., ACE's is a good tool to improve the efficiency at which patients are connected to these resources. Additionally, there is a monetary benefit for clinics due to Medicare providing incentives for using ACEs for patient

Supporting Agricultural Workers during Smoke and Heat

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Purposes/Aims: The purpose of the study is to understand agricultural workers' experience during periods of heat and wildfire smoke to support protective workplace interventions. Our first aim is to broaden our research team to include a community-based partner from a Federally Qualified Health Center, Quincy Community Health Center, serving agricultural workers. Our second aim is to describe agricultural worker and other stakeholder perceptions of heat and smoke conditions in the workplace and proposed risk reduction strategies.

Rationale/Conceptual Basis/Background: As climate change increases heatwaves and wildfires, heat exposure and wildfire smoke have emerged as co-occurring threats to workers' health during harvest. Agricultural workers are at particular risk for heat and smoke-related illness due to the nature of their work being outdoors, and the exertion required to do the work. In the summer of 2021 in Washington State, two emergency rules were enacted by the Washington State Department of Labor and Industries to protect workers from extreme heat and wildfire smoke. The effectiveness and enforcement of the rules has yet to be evaluated. The CDC Program Evaluation framework, also used for policy evaluation, will be used in this study to engage multiple stakeholders in evaluating these rules, including those most impacted by the problem. Input from multiple stakeholders can give insight into the impact of implementation on-the-ground and inform further policy development and workplace interventions.

Methods: In June of 2021, our team was invited to participate in an ongoing series of calls facilitated by the Northwest Regional Primary Care Association that were used to support agricultural worker health during COVID-19. We listened and leveraged their structure to identify three stakeholder groups: frontline workers, advocacy organizations and government agencies. We designed a qualitative study using focus groups for frontline workers, including agricultural workers and health promoters (*promotoras*), and key informant interviews for representatives from community-based organizations and government agencies. The university Human Research Protection Program has determined that the study satisfies the criteria for Exempt Research. We aim to host two focus groups and six key informant interviews in English or Spanish. Audio recordings will be professionally transcribed and translated. Reflexive thematic analysis, using methods outlined by Braun and Clarke, will be used to identify patterns in the data.

Results: Themes will be identified with exemplar quotes.

Implications for Translation to Practice/Further Research/Policy: Results will inform clinicians who work in agricultural communities, and occupational health and safety specialists as they engage in a permanent rule making process that aligns with our changing climate. Results will also be used to design workplace interventions to protect the health and safety of this critical workforce.

Funding: Washington State University Health Equity Research Center

The Effect of an HPV Intervention on College Students' Vaccination

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Purposes/Aims: The purpose of this study is to examine the effect of an HPV video intervention on the HPV vaccination intent among college students aged 18-26.
Background: Unsafe sexual behaviors in young adults including college students increases the risk for acquiring HPV. HPV infections and related cancers are significant public health issues for both males and females. The HPV vaccine has shown promising outcomes in preventing HPV and related cancers. However, vaccination rates among college students still remain suboptimal. It is crucial to provide culturally and contextually relevant education to promote vaccination in this at risk population.
Methods: We conduct a two-group randomized control trial (RCT) in a sample of 300 college students (n = 150 each group). Inclusion criteria are English-speaking college students aged 18-26 who have not been vaccinated against HPV. Eligible and consented participants recruited via Amazon Mechanical Turk (MTurk) are invited to join the study. They will first complete an online pretest survey (T0) via REDCap, randomly assigned to the intervention or comparison group, and complete a posttest survey (T1) after viewing their assigned education. Participants assigned to the intervention group will watch two brief videos (2 minutes each) while participants assigned to the comparison group will read an HPV education brochure created by CDC. Guided by the Theory of Planned Behavior (Ajzen, 1991), survey questions will measure HPV-related knowledge, attitudes, perceived behavioral control, subjective norms, vaccination intent (T0 and T1), and sociodemographic and health history information (T0 only). We will conduct descriptive statistics to describe the distribution of sample characteristics and key variables; repeated-measures ANOVA will be used to examine between-group differences in vaccination intent (primary outcome) and patterns of change for theoretical constructs.
Results: Data is currently being collected and analyzed; we plan to have it completed by February 2022.
Implications: The study findings will inform the effect of the HPV video intervention (vs. HPV information brochure) on college students' vaccination intent and the changes in the theoretical variables. If the results are significant, this convenient and non-invasive intervention has the potential to increase HPV vaccination rates and consequently, reduce HPV-associated cancers in college students.

Funding: Arizona State University

The Health Influencer Model: Leveraging Social Media Influencers as Health Educators

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Purposes/Aims: The purpose of this presentation is to describe *The Health Influencer Model* and how it may improve access and uptake of health education in populations for whom skepticism towards health initiatives/guidance reflects a legacy of disenfranchisement, or depersonalized care resulting in lost patient trust.

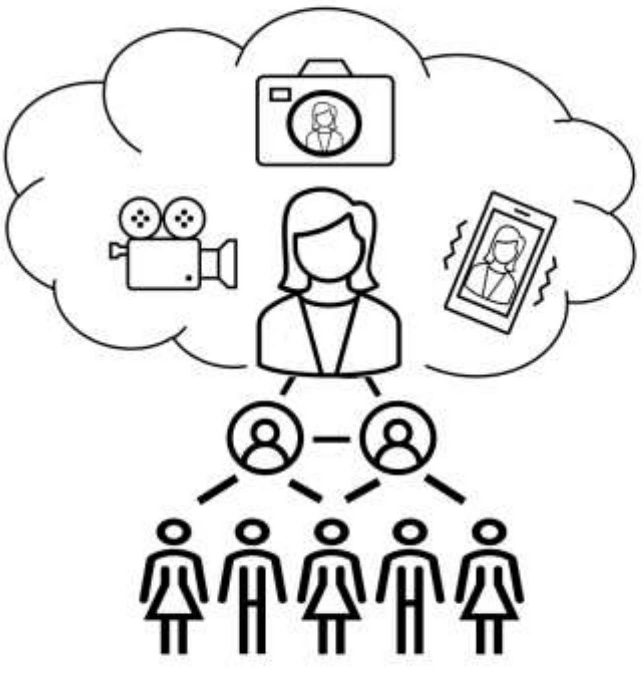
Description of Theory or Definition of Concept to Be Discussed: The Health Influencer Model leverages trusted relationships between social media personalities ("influencers") and their followers to promote health behavior uptake and improve access to vetted, evidence-based health education.

Internal Consistency of the Theory Developed, Conceptual Approach: The creation of the *Health Influencer Model* was informed by the *Burnout Dyad*, a conceptual model which posits that during clinical care, patients and providers co-construct the social environment by each bringing their unique individual and group-based identities (including prior exposure to trauma within and outside care-seeking/delivery experiences [also known as 'priors']). These priors influence perceptions and processing of each clinical interaction, and inform knowledge uptake/behavioral adoption, especially in highly hierarchical or depersonalized settings. *The Health Influencer Model* suggests that promotion of preventive care behaviors, especially among historically marginalized communities at higher risk of infectious, chronic, or terminal illness, may be hampered by a patient's prior negative exposure to providers or the healthcare system. They may be more receptive to health education delivered by a trusted person with whom they engage regularly online.

Logic Linking the Theory or Concept to Nursing Practice or Research Problem: While health education is traditionally delivered face-to-face, *Health Influencers* can engage virtually with their audience (via posting and responding to comments on social media platforms) and can be entirely focused on delivering educational content or can weave critical information through story-based narratives that resonate with their target audience. In recent studies of depression and anxiety among Latina women in the US, a storytelling approach across multiple social media platforms (transmedia) demonstrated that using trusted characters, with whom an audience engages and develops a relationship, improves uptake of therapy via reduced stigma ("if she can do it, I can do it") and improved access to services not limited by insurance, transportation or other access issues ("virtual advice is available 24/7"). Health Influencers may achieve similar results through these same mechanisms and are burden-alleviating in that social media reach greatly amplifies delivery of and access to educational material- critical in the era of pandemic-related health care provider shortages. Finally, due to the nature of social media, content-based suggestions/information can ripple into off-line spaces when friends and family of the original viewer observe changes in beliefs or behaviors that prove to be beneficial (see Figure 1).

Utility of the Theory or Concept for Nursing Practice or Research: *The Health Influencer Model* represents both a promising methodology and conceptual framework for use in research and practice among ethnic/racial minority and other historically marginalized communities. As a methodology, it allows for easy, adaptable education dissemination, and as a conceptual model, it encourages nurse researchers to reflect on the importance of social media influence on health practices and behavior uptake.

Figure 1. The Health Influencer Model



Antecedents of MORAL Injury in Hospital Nurses: A Scoping Review

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Aim: To identify contributing factors of moral injury among nurses who care for adult patients in the acute care setting.

Background: Moral injury is broadly described as the physical and emotional "tearing down" of an individual when they are met with constraints that conflict with or fail to support their values and belief systems. While moral injury has been studied extensively among war veterans with post-traumatic stress disorder, the concept has only recently been studied among healthcare professionals. The dire work conditions brought on by the COVID-19 Pandemic has brought the concept of moral injury to the forefront in healthcare, especially in nursing, as many are leaving the profession.

Methods: A systematic scoping review was performed following the Joanna Briggs Institutes methodological recommendations for scoping reviews. The scoping review was guided by PRISMA Extension for Scoping Reviews. A comprehensive and structured literature search was undertaken using five databases: PubMed (Medline), Embase, Scopus, PsychINFO, and CINAHL. Year of publication of articles ranged from 2000 to 2021. Results were deduplicated in EndNote X9 and uploaded into SYSREV for screening and analysis by title and abstract. A norming session was held prior to full screening of articles for consistency. Each article was reviewed by two team members and any discrepancies were resolved by an additional team member as needed.

Results: Twenty-five studies out of 1442 papers met the criteria for this review and were thematically analyzed. Most studies were quantitative design (n= 12), followed by qualitative design (n=7), and mixed methods design (n=6). The sample size varied from 10 to 1,538 participants. The overall theme identified was ethical conflict. These conflicts were further broken down into categories of nurse well-being/health factors, system/workplace factors, and patient/family factors. Nurse well-being/health factors included nurse centered concepts such as grief, second victim syndrome, moral distress, communication, job satisfaction, deception, self-image, and fear. System/workplace factors included system processes, retention, staffing, role conflict, competency of co-workers, staffing, work environment, organizational priorities, medical versus nursing values, lack of appreciation, and marginalization during ethical conflict. Patient/family factors include death and suffering through end of life, helping families, focus on quantity of life versus quality of life, ethical conflict, futile care, medication errors, and protecting patient rights.

Implications for Practice: This scoping review provides insight into how hospital systems, support at the organizational level, and ethical conflict can affect the nurse working in the adult, inpatient setting. Negative consequences include an increase in nurse turnover or even leaving the profession. By improving organizational and system processes and redesigning culture in the workplace, many of these issues can be eliminated. Understanding the driving forces leading to moral injury in the nurse and often job dissatisfaction is foundational in understanding nurses' needs during a time when nurses need support.

Barriers Identified by Nursing Leaders in Supporting Nursing Research

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Problem Description-Patient facing nurses have cited a lack of leadership support in conducting research. A lack of research knowledge by nursing leaders has also previously been identified. I determined to learn other barriers nursing leaders would identify and if a brief module on basics of nursing research might mitigate these barriers.
Methods: Design: A translational research study (Doctor of Nursing Practice project) utilized the Barriers to Nurses' Participation in Research Questionnaire with a pre- and post-test.
Sample: Nurse leaders with an even distribution of managers/assistant managers, charge nurses, and directors/chief nursing operating officers.
Context: Nurse leaders from six mid-sized acute care hospitals.
Intervention: Nursing leaders were provided links for a pre-test, an interactive learning module on clinical scholarship or the basics of nursing research, and a post-test.
Measures: The Barriers to Nurses' Participation in Research Questionnaire (BNPRQ) had been used in a large study. The barriers surveyed included a lack of time, knowledge, mentors, infrastructure, incentives, nursing research council, leadership support, and training. Qualitative questions were added.
Demographics such as age, education, position, and years of employment.
Analysis: Paired and un-paired *t*-tests, descriptive statistics, and a qualitative analysis were performed using Braun and Clarke's Reflexive Thematic Analysis.
Ethical Considerations: Subjects were recruited from six different hospitals, selected a pseudonym, and no identifying data was collected. A mix of Magnet and Non-Magnet designated hospitals were used; respondents were not asked to identify their hospital's designation.
Results: The pre-test group ($n = 17$) of nursing leaders was 5 CNOs/directors, 7 assistant managers/managers, and 5 charge nurses. The post-test group ($n = 8$) consisted of 3 CNOs/directors, 3 assistant nurse managers/managers, and 2 charge nurses. The Pre-test group cited "lack of time" as the number one barrier. Nearly 50% felt a lack of knowledge hindered, and 52.96% either strongly agreed or agreed that the intervention improved their research knowledge. Near this same cited the lack of time, mentors, and resources hindered their ability to support or conduct research (Figure 1). A lack of leadership support on the lower levels, data collection/tools, a research mentor on site, and guidance for developing research inquiry were identified qualitatively.
Summary: Nursing leaders felt many of the barriers that front-line nurses have reported, including a lack of leadership support. Nursing leaderships' knowledge and support of nursing research in 50% of the post-test respondents improved.
Interpretation: The pre-test group of leaders results from six different hospitals were consistent with other large studies. The number one hinderance was time, with other strong barriers such as lack of knowledge, resources, and financial support.
Limitations: Small sample size which may have played a part as nurse leaders had the overriding concerns of staffing and dealing with the pandemic.
Conclusions: Nursing leaders must be provided the necessary tools that have been identified per their local leaders to support nursing research. Some organizations foster nursing research in theory but need to recognize that more research knowledge and tools are needed by nursing leaders to be successful at supporting nursing research.

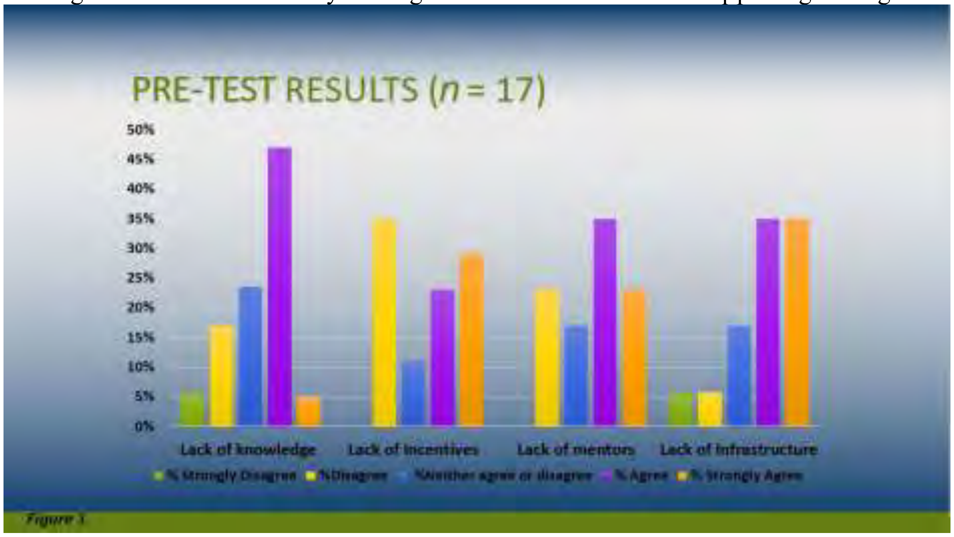

Figure 1

Clinical Nurse Attending Role: A Novel Nursing Approach to Patient Safety

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Purpose/Aims: Our purpose with this quality improvement initiative was to decrease serious safety events in our quaternary free-standing pediatric hospital. This was accomplished by instituting a Clinical Nurse Attending (ClNA) in each of our acute and critical care units. The role was designed to prioritize and mitigate risk and develop a plan of care alongside the bedside nurse. This role is focused on communication, escalation of safety concerns, and opportunities to enhance patient centered care. This role was designed and created for the following: bridge novice to advanced clinical expertise, model communication and escalation to enhance clinical outcomes, and standardize evidence-based nurse practice.
Rationale/Background: This organization's leadership looked at past serious safety events and decided to address these events through a call to action to prevent similar events in the future. Nursing leadership assessed best practices, literature, and innovative thinking to propose a new nursing role, the Clinical Nurse Attending. This is a direct patient centered care role that focuses on safety and nursing quality of care.
Brief Description: The ClNA evaluates whether the plan of care mitigates any risks the patient may have including hospital acquired infections, conditions, mental health considerations including suicidality and clinical deterioration. The ClNA works directly with the bedside nurse to communicate and escalate these concerns to the provider team and clinical leadership, if necessary. There was an extensive interview process with an aim at hiring nurses with specific qualities and characteristics centered on communication, adaptability, and leadership. All ClNAs are clinical experts, with graduate education and professional certification. The ClNA is intended to elevate and standardize nursing practice across the organization. Operationally, the ClNA identifies risk and role models to the bedside nurse how to elevate the concerns to the provider team. The ClNA maintains a focus on each patient situation until the concern is resolved.
Assessment of Findings: Role sensitive indicators were developed to measure metrics of success. Data is being collected on rapid response activations, preventable code blue events outside the intensive care units (ICU), and proactive ICU transfers. Qualitative data is gathered on staff's perception and beliefs around ease of communicating concerns and escalation.
Conclusions and Recommendations: Since implementation six months ago, we have seen improvements in all of the role-sensitive indicators such as clinically initiated rapid response activations, increased proactive ICU transfers and decreased preventable codes outside of ICU. Programmatic goals for year one and two are in progress and include standardization of communication and escalation, while year two involves standardizing nurse practice across the institution. Research is recommended to examine how intentional placement of graduate level nurse role models and/or intentional placement of qualified individuals may improve practice and advance leadership skills of bedside nurses.

Covid-19 and Nurse Anxiety, Coping, and Resilience

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Purpose: The purpose of this on-going study is to (1) determine relationships between anxiety, depression, resilience, and Covid 19 knowledge among nurses working in an acute care facility 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 previously described. Before the Covid 19 pandemic a constellation of poor mental and physical health outcomes had been previously described in the nursing population. By building personal strength in nurses through resilience, nurses can adjust in a positive manner to adverse situations. The application of Lazarus and Folkman's Transactional Theory of Stress and Coping can additionally assist with understanding personal 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 Southern California healthcare system. 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. A re-survey is planned for early 2022.

Results: In the preliminary survey 578 complete responses were collected of which 71% of the nurses worked in bedside clinical positions. 63% of respondents worked in ICU or acute care units. 33.9% reported moderate to severe depressive symptoms. 34.6% reported moderate to severe anxiety and 18.7% reported low levels of resilience. 20.1% reported new unit assignment and 26% of respondents reported a housing disruption due to Covid 19. At the time of the survey in early 2021, 68.4% of the respondents expressed hopefulness and felt that Covid 19 would be successfully controlled.

Implications for Translation to Practice: The initial survey showed a concerning number of nurses experiencing depression and anxiety as well as low levels of personal resilience. Healthcare systems have instituted strategies to assist the mental health and build resilience in nurses in the frontlines of the pandemic, but more inquiries are needed to identify predictors of resilience. Further planned analysis of this study data will utilize regression models to investigate predictor variables that build or detract personal resilience. A re-survey will occur in early 2022 to assess the impact of organizational strategies to enhance resilience in nursing staff. Further research is also needed to identify employment trends such as use of sick leave or attrition rates to further identify the impact of mental health issues during a pandemic.

LEADERSHIP/ADMINISTRATIVE ISSUES

Joy and Chaos: Understanding the Lived Experience of Pediatric Nurses during COVID-19

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Aims: Among pediatric nurses working in a large academic medical center, we aimed to identify important concerns, practice changes, unintended consequences, and tensions during the initial global COVID-19 pandemic response.

Background: Little is known about pediatric nurse responses to this pandemic and those within the last 100 years. While previous research documents a psychological impact, the findings are not fully generalizable because pandemic experiences of pediatric nurses likely vary from those in adult care settings. An understanding of their experience can inform future planning, response, management practices, and disaster competencies for pediatric nurses.

Methods: In a qualitative intrinsic case study, an initial virtual semi-structured interview and a follow-up interview were spaced 1-month apart. Interview questions addressed how the organization communicated practice and policy changes. Participants also shared their personal experiences. Interview data were collected from October 2020 to March 2021. Four doctorally prepared nurses with expertise in qualitative research systematically analyzed the interviews using a thematic approach.

Results: Nurses (n=30; mean age 38.5 yrs; mean 14.6 yrs nursing experience) from a pediatric hospital representing inpatient and ambulatory care participated in this study. Seven were mid-level leaders; 8 held a graduate degree. Pediatric nurses voiced concerns including overwhelming communication, frequent practice environment changes, and lack of personal protective equipment (PPE) due to conservation efforts. Transparent communication, however, was valued. Among forced practice changes, stringent visitation restrictions prevented flexibility for families with a sick child and compromised meeting unique developmental needs among pediatric patients. Many nurses overcame this barrier by leveraging innovative virtual connection approaches and supported developmental growth through creative practices. Pediatric nurses felt a professional obligation and demonstrated self-sacrifice in responding to patient care needs. Yet, complying to organization and state safety regulations created psychological and moral injury as an unintended consequence. Many were deployed to different units and roles, requiring new skill development during chaotic practice transitions. Stress, anxiety, and depression were identified as tenets of their lived experience. Tensions were described in the context of PPE, seen as a known protection, yet also as a psychological and social barrier to meeting patient and family needs. While nurses who had a voice in practice changes verbalized professional pride and validation of skills/expertise, those without such voice felt exclusion and a lack of support/control. Moreover, while some nurses led initiatives seen as a beacon of hope, others were displaced and separated from clinical care, co-workers and family. An unintended positive consequence of this study was time for participants to reflect and renew commitment to the profession.

Implications for Translation to Practice: Psychological and moral injury were unintended consequences of professional obligation among pediatric nurses during the COVID-19 response, underscoring a need for emphasis on mental health support. Future management strategies including staff contribution to decisions, frequent and transparent communication, streamlining of practice changes, and purposeful cross training to multiple clinical areas. Specific to pediatrics, practice innovations to support growth and developmental needs through virtual outreach forms a platform for future research to inform planning and disaster competencies among pediatric nurses.

Prevalence of Health Conditions Among Nurses: A Systematic Scoping Review

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Purpose/Aims: To explore the prevalence of health conditions among registered nurses.
Rationale/Conceptual Basis/Background: Working as a nurse has been described as hazardous and is associated with several risks and poor health outcomes despite being a profession with a focus on improving health. Risks include physical/mental stressors, suicide, workplace violence, shift work/irregular sleep patterns, and exposure to dangerous substances. Disability, illness, and burnout are of concern, particularity as the global nursing shortage continues to rise. To date, prevalence of health conditions among nurses and the role that the profession plays in those health conditions has not been systematically evaluated. It is imperative to understand the prevalence and connection between working as a nurse to poor health outcomes to address and improve the safety and longevity of working nurses.
Methods: A systematic scoping review design was employed following the recommendations by the Joanna Briggs Institute methodological recommendations for scoping reviews. The systematic search strategy and reporting was guided by PRISMA Extension for Scoping Reviews. A comprehensive search was designed using a series of free text terms and subject headings. Results were deduplicated in EndNote X9 software and uploaded into Covidence for screening and analysis with the title and abstract, and then by examining the full text of each article. Team members performed a norming exercise prior to screening to ensure consistency. Screening of each report was performed by two independent reviewers, with any discrepancies resolved by discussion and a tiebreaker as needed. The Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guidelines were used to report the risk of bias and transparency of the studies.
Results: A total of 34 articles were determined to meet criteria and were included after reviewing 2,330 articles found during the initial database search. The years of publication ranged from 1992 to 2020. Correlative descriptive was most often used (n=29). The sample size varied between 190 and 68,488 participants. In cases where a study included healthcare providers beyond nurses (e.g., nursing assistants), nurses were described separately in the analysis. Due to the methods used in the majority of articles, studies of prevalence of health conditions among the nursing population were lacking. The health conditions studied broke down into six categories: 1) Work-related injuries and hazards (11 articles); 2) Unhealthy lifestyles (7 articles); 3) Mental health conditions (6 articles); 4) Burnout (6 articles); 5) Fatigue, sleep & migraines (5 articles); and 6) Reproductive health (2 articles).
Implications for Practice/Further Research/Policy: The role of work on nurses' health conditions varied from an immediate impact on health (e.g., a needlestick or injury), to cumulative impact (e.g., scheduling or demands), and some with an unclear antecedent potentially stemming from personal and work factors (e.g., incidence of suicide or substance use). Within the work environment, the physical, emotional, and cognitive demands of work were all identified as antecedents to be further explored and addressed to improve nurse health. Understanding and mitigating negative impacts of the work environment on the health of the nurses is crucial to the solvency of the workforce.

Scaffolding a Clinical Judgment Approach to Exam Remediation

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Purpose/Aims: The purpose of this project is to create a scaffolded approach to remediation following benchmark testing. The approach includes coaching on a process of exam review that aligns with skills used in development of clinical judgment. After completing the review process, taking an alternate version of the same exam, and comparing results, we hypothesize that students will see the benefits of following a clinical judgment process to assessing their own learning.

Background: A common approach to exam review and remediation includes having students review test results, study missed content, and complete more practice questions. Remediation guides provided by testing vendors, offered without explicit guidance, leave students to simply fill in the blanks, and miss the impact of their remediation efforts on improving learning and performance on subsequent exams. By the time students complete 14 benchmark exams with the same approach to remediation each time, the process becomes rote. Drawing from the idea that novice learners need a guided, stepwise approach to learning new skills, a revised exam review process was developed. The approach includes elements of coaching, connection to the clinical judgment process, and review of the process following a subsequent assessment of learning on the same content.

Methods: During their program, students complete 14 benchmark exams. Two exams were identified for implementing a scaffolded remediation process for this pilot: a fundamentals exam taking during the second term, and a diagnostic exam taking during the final term. The fundamentals exam was selected because two versions of the exam are available and the exam is taken early in the program, serving to provide students with a path to review and remediation that can be used throughout the program. In the final term, students complete a diagnostic exam and can apply their review and remediation efforts to the last exam in the program, which serves as a predictor of success on NCLEX.

There are four steps identified. Step 1 involves noticing cues; students review their exam results and answer prompts intended to help them identify patterns in their responses. Step 2 involves interpreting; students review their performance in relation to Client Needs categories and content areas, then identify priority topics for review. Step 3 involves responding and implementing; students determine how they will review the content identified in Step 2 and document their review progress. Step 4 involves reflecting; students are prompted to reflect on how well their strategies help improve their performance on an alternate version of the exam. Accountability is aided through use of a grading rubric that rewards review and remediation efforts more significantly than the original score.

Results: The researcher will query the faculty and students involved in this pilot project about the process and report on the results.

Implications: Using a clinical judgment approach to review and remediation of benchmark exams can help students self-regulate their own learning. This can result in improved learning, increased ability to assess gaps in knowledge and effectively remediate content, and ultimately, support student success in nursing education.

Self-Efficacy in Nurse Entrepreneurs: A Concept Analysis

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Purposes/Aims: This poster provides an in-depth concept analysis of self-efficacy within the context of nurse entrepreneurs' roles using the approach of Walker and Avant. Launching and sustaining one's own business is not easy, and several factors are involved in a successful business. This is especially so for nurse entrepreneurs, whose professional training does not normally address entrepreneurship. Personal characteristics of nurse entrepreneurs can be important for success in leading nursing enterprises. One of these characteristics, **self-efficacy**, is particularly important because it relates to individual belief in capacity to execute behaviors necessary to launch and manage a high-performing business. While the concept of self-efficacy has been studied and documented in entrepreneurs in general, a comprehensive conceptualization of self-efficacy in nurse entrepreneurs is limited in the current literature.
Description of Theory or Definition of Concept to Be Discussed: Exploration of self-efficacy in nurse entrepreneurs was accomplished through a literature review. Five databases (PubMed, CINAHL, Embase, PsycINFO, Web of Science) were searched, concatenating relevant terms, for full-text articles from 1/2012 to 9/2021, with 27 articles identified. After full-text screening, 18 articles were selected for analysis. Based on attributes, antecedents, and consequences described in the literature, an operational definition of self-efficacy within the context of nurse entrepreneurs' roles was formulated. Self-efficacy in nurse entrepreneurship refers to nurses' confidence in their ability to perform entrepreneurial tasks and create a healthcare business. Whereas low self-efficacy beliefs tend to weaken performance, high self-efficacy contributes to effective task completion, effort, and performance, playing an essential role in developing a healthcare business.
Internal Consistency of the Theory Developed, Conceptual Approach, or Process Used: Using Walker and Avant's approach to synthesizing evidence and conceptual ideas, statement derivation was a key strategy used in developing the conceptual model, which was aligned with Bandura's theory of self-efficacy. Self-efficacy judgments of nurse entrepreneurs are influenced by performance accomplishments, vicarious experience, social and verbal persuasion, and physiological and emotional states. Self-efficacy guides nurse entrepreneurs' capabilities in leadership and management behaviors and running a business with high profit, limited losses, and quality nursing care. Both behavior and performance can therefore lead to nursing business success.
Logic Linking the Theory or Concept to Nursing Practice or Research Problem: This concept analysis the concept of self-efficacy to nurse entrepreneurship and is the first known analysis of the critical concept of self-efficacy in the context of the nurse entrepreneur role. The conceptual model increases our understanding of nurse entrepreneurship and informs approaches that increase capacity for nursing enterprise, enhance engagement, and promote success in health-related businesses.
Conclusions, including a Statement about the Utility of the Theory or Concept for Nursing Practice or Research: The conceptual model of self-efficacy in nurse entrepreneurs can help to understand how to foster its development through education and networking that incorporate experiential components to improve leadership and managerial skills for success in the healthcare business. The downstream potential of this work is healthcare system improvement and reform that supports quality patient care and the overall health of individuals, families, and communities.

Content Validity of Perceptions of Obstetric Violence in Providers Measurement Items

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Purpose/Aims: To conduct a focus group study with a sample of labor and delivery nurses who work in US hospitals to inform the content and face validity of items that will be used to develop an adapted measurement tool for perceptions of obstetric violence in providers (PercOV-P). The aim was to determine what labor and delivery nurses think about the previously validated items from the original measurement tool developed in Spain being representative of routine practices that are perceived as obstetric violence in the context of US maternity care. Another objective was to discover what participants thought about using the term obstetric violence as the latent variable for the development and future testing of the PercOV-P tool.

Background/Rationale: Obstetric violence is a sex-specific form of structural violence. It is a multidimensional problem that exists beyond the individual level where it is often embedded in routinized hospital practices that are medically unnecessary and harmful. The rationale for using qualitative focus groups is that indirect methods such as factor analysis are important in instrument development but are insufficient on their own to establish the validity of an outcome measure. The rationale for exploring use of the term obstetric violence is that the concept is not widely disseminated in the US healthcare sector, while the construct is theoretically stable and well established with US advocacy groups, studies from the social sciences, and in global research.

Methods: This was a qualitative focus group study with a data driven, emergent design. Content validity occurs during item development, and the purpose of this study was to generate measurement items that capture the essence of the construct of obstetric violence as it may be perceived in routinized hospital practices in the US context. An individual participation pathway was added for those who wanted to volunteer but had conflicts that prevented joining scheduled focus groups. Analysis was done with a co-researcher who is a faculty mentor and an expert in qualitative methodologies. Items that were recommended to be added were reviewed by an expert panel of three for final determination. Expertise included experience with item generation, measurement tool development, and familiarity with the concept of obstetric violence.

Results: The end-product from this qualitative focus group study will be the content validation of measurement items by labor and delivery nurses who work in US hospitals. The final results will inform the retention, rewording, and addition of items from the previously validated perceptions of obstetric violence in students (PercOV-S) questionnaire from Spain that will be adapted to the new PercOV-P tool.

Further Research: Next steps for the adapted PercOV-P tool after development, refinement from pilot testing, and psychometric testing with exploratory factor analysis are completed is to measure changes in perceptions of obstetric violence in pre-post studies with an educational intervention using interdisciplinary samples of maternity care providers. Known groups testing represents another area for future research that can explore the discriminatory performance of the instrument with interdisciplinary students and clinicians across maternity care settings.

Efficacy of an Online Mindfulness Treatment for Insomnia in Pregnancy

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Purpose: This pilot study aims to assess the efficacy, feasibility, and acceptability of a six-week online intervention that combines mindfulness meditation and cognitive-behavioral therapy for insomnia (CBT-I) for pregnant women with insomnia.
Background: Insomnia is common during pregnancy, especially in the third trimester. Significant adverse health-related outcomes are associated with insomnia for both maternal and fetal health. Emerging evidence has suggested that Mindfulness-Based Interventions (MBI) can decrease psychological distress and subjective sleep deficiency, as well as build stress tolerance. However, there are limited studies on the impact of MBI in pregnant women with insomnia.
Methods: This study was a randomized controlled pretest-posttest study. Participants completed surveys and wore an actigraph with electronic daily sleep diaries for 8 days at baseline and post-intervention. Participants were randomized to either mindfulness (self-directed learning modules about mindfulness meditation, sleep challenges in pregnancy, and behavioral strategies) or the education-only Control group. Participants in both groups completed daily sleep diaries during the intervention phase. Primary outcomes were sleep quality measured by Pittsburgh Sleep Quality Index (PSQI), feasibility, and acceptability. Secondary outcomes included Actigraphy data and PROMIS measures (Sleep-Related Impairment, Sleep Disturbance, Anxiety, Fatigue), Depressive symptoms, well-being, and quality of life. Exploratory outcomes included self-efficacy, patient activation, motivation, and mindfulness. ANCOVA was used to examine the differences in means between the mindfulness and control groups to test the efficacy of the intervention.
Results: Sixty-four participants were enrolled and 59 were randomized to treatment or control groups. Of the 59 women, 14 dropped out and a total of 45 (76.3%) were included in the analysis. The mean score of sleep quality measured by PSQI at the post-intervention was significantly lower (i.e., better) in the mindfulness group compared to that in the control group after adjusting for score at baseline (Mindfulness: 95% CI [4.35, 6.52], control: 95% CI [6.48, 8.71], Partial $\eta^2 = .157$). Moreover, the mindfulness group showed significantly lower (i.e., better) mean score across variables including sleep-related impairment, sleep disturbance, fatigue, and depressive symptoms at the post-intervention compared to the score of the control group after adjusting the baseline score (Partial $\eta^2 = 0.202, 0.155, 0.188, 0.093$, respectively). However, no significant group differences were found in objective sleep parameters measured by actigraphy and sleep diary at post-intervention. The overall satisfaction with the mindfulness intervention was high, with a mean of 4.1 out of 5. Suggested improvements for intervention included the modifications of the module interface and resolving technical issues.
Implications: This study provides preliminary evidence to support the efficacy of a digital mindfulness-based treatment for insomnia in pregnancy. This intervention needs to be further tested in larger samples with modifications related to the module interface/technical issues to increase acceptability and feasibility. Further studies are warranted to demonstrate the underlying mechanisms of improvement in self-reported sleep quality at post-intervention in pregnant women.

Funding: Center for Innovation in Sleep Self-Management (National Institute for Nursing Research award P30NR016585)

Evaluating the Impact of Mindfulness Meditation for Stress & Anxiety during Pregnancy

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Purpose: The study purpose is to determine if a more accessible form of mindfulness meditation (the Headspace app) can help reduce stress and anxiety during pregnancy.

Background: Maternal stress and anxiety levels during pregnancy are highly prevalent, with over half of pregnant women experiencing stress, and 20%-25% experiencing anxiety. Stress and anxiety are associated with poor outcomes for the woman during pregnancy, the infant, and the woman's long-term health. The most serious associations are the increased rates of infant mortality, preterm birth, and low birth weight infants.

There is evidence that mindfulness training is beneficial in reducing perinatal stress and anxiety. However, traditional mindfulness training entails in-person meetings, which creates barriers, limiting their accessibility. Internet mindfulness-based interventions (iMBIs) may provide an alternative. A review of the literature yielded a handful of studies with stress and anxiety as outcome variables. Findings revealed a decrease in stress, or a trend in anxiety reduction. However, limitations of these studies included high attrition rates, poor adherence, and lack of objective biological measurements like heart rate variability (HRV) and sleep.

Research supports that HRV is one of the most robust and objective measures of the stress response, with higher levels of stress correlating with lower HRV. Additionally, increased stress levels are correlated with decreased sleep quality. The Oura Ring is a highly accurate sleep tracking device, which can measure HRV and sleep quality.

The studies reviewed in the literature used a variety of mindfulness interventions, however none of them were top-rated, which may have contributed to the poor adherence and attrition outcomes. These issues may be enhanced by using a top-rated iMBI like Headspace. The Headspace app is the highest scoring mindfulness app and has been shown to reduce stress and improve well-being in several controlled trials. Including measurements of HRV and sleep contributes to the robustness of this study by providing objective physiological measurements of stress.

Methods & Specific Aims: The research in progress is a single-arm pilot study assessing the impact of learning mindfulness meditation via the Headspace app on reducing stress and anxiety in pregnancy.

Aim 1: Evaluate the impact of the Headspace app on stress and anxiety among 30 pregnant women. Ho. 1: Participants practicing meditation exercises via the Headspace app will report decreased levels of stress and anxiety from baseline to post-intervention.

Aim 2: Evaluate the physiological effects of the Headspace app (HRV and sleep changes over time) among 30 pregnant women utilizing the Oura Ring. Ho. 2: Participants practicing meditation exercises via the Headspace app will show an increase in their HRV, and an improved sleep score.

Aim 3: Determine if participant app usage amount is associated with differences in measured outcomes. Ho. 3: Study participants who use the app more frequently (number of sessions and/or total minutes used) will experience a greater reduction in their stress and anxiety than participants who use the app less frequently.

Implications: The results of this study may provide support for an evidence-based intervention to improve health outcomes for this vulnerable, under-studied population.

Examining Cesarean Birth Rates in Asia Using the Robson 10-Group Classification System

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Purpose/Aims: To synthesize and critique the literature examining Cesarean Birth (CB) rates in Asian countries using the Robson 10-Group Classification System (TGCS).
Background/Rationale: There are increasing concerns about advancing rates of CB worldwide; however, less is known about specific antecedent events and/or indicators contributing to rising CB rates in Asian countries. In 2015, the World Health Organization (WHO) proposed the use of the Robson TGCS as a global standard for assessing, monitoring, and comparing CB rates within/across healthcare facilities and countries worldwide. While studies examining CB rates using the Robson TGCS have been conducted in Asia, findings from these studies have not been synthesized.
Methods: A review and synthesis using PRISMA guidelines was conducted.
Data Sources: MEDLINE, CINAHL, PubMed, Scopus, and Google Scholar.
Study Selection: Research articles, conducted in Asia from January, 2011 to June, 2021 that investigated CB rates using Robson TGCS were selected. All articles were in English and published in peer-reviewed journals. This timeframe was selected to focus on studies conducted after the TGCS was first introduced as well as after when the WHO recommendation was first announced.
Data Extraction: Author, year of publication, country, UN geoscheme/region, country Human Development Index (HDI), and Robson TGSC groups were extracted, along with the number of participants, maternal age, study duration, and number of sites/hospitals involved in each study.
Data Synthesis: Of 395 publications, 24 studies met the inclusion criteria, were analyzed, and synthesized in this literature review.
Results: Regardless of region, country, or HDI level, women with a previous CB (Robson Group 5) is the largest contributor to rising CB rates across Asia. Nulliparous women with induced labor or CB before labor (Robson Group 2) was the second largest contributor to rising CB rates across Asia. Most studies were conducted in South, South-East, and East Asia and included countries with high to very high HDI levels. Maternal age was inconsistently reported in this literature and there were no reports linking maternal age to Robson groups, even for those high-risk groups at the extremes of reproductive age at both ends (< 20 years and > 35 years age).
Implications: Use of the Robson TGCS provides more meaningful insight into antecedent events and/or indicators of CB rates. TGCS also supports comparison of CB patterns by population and deeper insights into the local influences and unique differences within/across Asia. Future research should: 1) identify maternal age groups, 2) investigate rising CB rates and Robson TGCS in low level HDI Asian countries, and 3) use TGCS to study CB in Central Asia. This will provide opportunities for increased understanding of rising CB rates and the development of targeted and tailored interventions.

Implementation of a Perinatal Anxiety Screening and Referral Process

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Purpose: Perinatal anxiety is an underdiagnosed mental health disorder. The University of Colorado Nurse-Midwifery Practice (CUNMP) had a baseline perinatal anxiety diagnosis rate of five percent, whereas the literature suggests a prevalence of about 15%. Unfortunately, current screening practices for perinatal mood disorders focus on depression alone, often missing anxiety. The primary aim of this project was to address the gap by implementing an anxiety screening process using the Edinburgh Postpartum Depression Scale (EPDS) anxiety subscale (3A) at the initial obstetric visit, subsequently increasing identification of perinatal anxiety leading to a 75% referral rate to perinatal mental health services.

Background: The American College of Obstetricians and Gynecologists (ACOG) recommend that all patients be screened with a validated tool for anxiety at least once in their pregnancy and that all organizations have a mental health screening protocol and referral process. There are several validated perinatal anxiety screening tools. The 3A subscale was chosen for this project since the CUNMP uses the EPDS for depression screening but lack 3A subscale evaluation.

Project Description: The CUNMP is a nurse-midwifery led practice at the University of Colorado Anschutz Medical Campus providing care for patients from diverse racial and cultural backgrounds primarily insured by Medicaid. This project implemented the 3A subscale and referral process over a six-month period. The pre-implementation phase focused on medical assistant administration and documentation of the EPDS tool and training nurse-midwives in the use and interpretation of the 3A score. The 3A subscale was integrated into the electronic medical record by embedding score calculations and referral prompts into provider note templates. Implementation phase data were collected twice monthly to show effects of plan do study act (PDSA) cycles on outcome, process, and balancing measures. The PDSA cycles focused on medical assistant and nurse-midwife education, improving the referral process, and communication with the Perinatal Resource Offering Mood Integrated Services and Evaluation (PROMISE) clinic, the department's perinatal mental healthcare clinic. PROMISE was the primary referral location for patients with positive 3A screens. Analysis of patient and site characteristics will use descriptive statistics, measures will be analyzed with run charts, and pre and post implementation surveys will be analyzed with qualitative and quantitative statistics.

Outcomes Assessment: At the completion of the six months, the referral rate increased from 50% to 69.8% and anxiety risk detection increased from five percent to 12.9%. There was a 100% referral attendance rate of at least one PROMISE clinic visit. Post-survey results to assess provider perception of process maintenance, feasibility, and useability are pending.

Discussion: The implementation of the 3A subscale increased perinatal anxiety risk identification and referral rate meeting the ACOG practice recommendation. While consensus on the most reliable perinatal anxiety screening tool is lacking, a practice implication is that the implementation of the 3A subscale can increase identification of perinatal anxiety risk and referral to mental health care.

Knowing Their Story: Nurses Caring for Women Using Marijuana During Pregnancy

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While remaining federally illegal, the use of both medical and recreational marijuana in the United States continues to rise as individual state laws become more permissive and its use more socially acceptable. Paralleling this trend, the use of marijuana during pregnancy is also increasing. However legally defined, marijuana use during pregnancy is discouraged and has been associated with serious health concerns for the mother and her infant. Navigating the use of marijuana during pregnancy is challenging for healthcare providers as it is not well researched, and its effects are not clearly understood. While the experiences of perinatal nurses working with women affected by general substance use are well-documented, what is not well understood is how marijuana use by itself is viewed by these nurses.

As no previous studies were identified exploring this phenomenon, the three-fold purpose of this study was to understand the experiences of perinatal nurses who provided care for women who used marijuana during their pregnancies; to gain a deeper understanding of their beliefs, feelings, and how they perceived use of marijuana during pregnancy; and to understand the educational needs these nurses perceived regarding prenatal marijuana use. Thirteen nurses (N = 13) who practiced in the perinatal field from across the United States agreed to participate in this study. Twelve interviews were conducted via Zoom and one, in person. The interviews were recorded, transcribed, and interpreted for their meaning.
Six themes were identified and validated with participants through member checking. The following themes that emerged provided a glimpse into the experiences, perspectives, and beliefs of perinatal nurses who cares for women using marijuana during pregnancy: (a) mixed emotions, (b) more and more patients are positive, (c) forming a relationship, (d) effects on the baby, (e) the healthcare team needs to be on the same page, and (f) we need to know more.

This study revealed a strong need for more knowledge and education regarding marijuana use during pregnancy and the development of strategies to improve communication skills for nurses who work with this population of women. Further, findings provided a foundation for the development of educational strategies and interventions targeted to enhance knowledge and communication skills for perinatal nurses and nursing students who might work with women who used marijuana during pregnancy.

Maternal Self-Efficacy Measurement Among Mothers of Infants: A Systematic Review.

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Purpose/Aims: To review and synthesize the literature regarding self-report measures used in studies to assess maternal self-efficacy (MSE) among mothers of infants 0-1 year of age.
Background/Rationale: *Maternal self-efficacy* (MSE) has been defined as a mother's belief in her maternal ability, especially her ability to positively influence the behavior and development of her children. Higher levels of MSE are associated with improved parenting skills, improved child development, healthier mother-child feeding practices, and positive child health outcomes. In contrast, lower levels of MSE increase risk for ongoing maternal stress and depression, which places infants at risk for worse health-related outcomes. While MSE is clearly a critically important variable to assess in mothers of infants, there are a large number of MSE self-report measures making it difficult to know which measure the researcher should choose for which study.
Methods: Systematic review using PRISMA guidelines.
Data Sources: OVID (Medline), CINAHL, PsycINFO, Scopus, Google Scholar.
Study Selection: Research articles that included measurement of MSE from January 2000 to September 2021. This timeframe was selected to build on an earlier systematic review of self-report measures of *parental* self-efficacy that captured a subset of MSE measures used across a broader time period (1970-2016).
Data Extraction: MSE measures, descriptive details (including the level of self-efficacy being assessed [e.g. global, domain-specific, task-specific], concept(s) assessed by the measure, reliability, eligible age ranges, and instrument origins, development, use, and translations.
Data Synthesis: 11 MSE measures were identified.
Results: While all studies reported measuring MSE, only 4 studies (36%) used a measure that specifically assessed MSE. The other seven instruments assessed closely related concepts, such as competence and confidence. The majority (*n*=9; 82%) of the measures were domain-specific, with only two measures at the task-specific level. The measures reported acceptable reliability data; however, the participant burden varied. Only 6 measures focused on the entire infant age range (0-1 years), with five measures limited to infants under 6 months of age. Ten measures (91%) were originally developed in English-speaking, Western countries. Only one measure was originally developed in a Thai-speaking, Asian country.
Conclusion: Maternal self-efficacy (MSE) is a critically important variable to assess among mothers of infants. Yet, the current variety and scope of MSE instruments requires attention to nuanced differences in measurement options. This literature review and synthesis examined and compared MSE self-report measures for mothers with infants 0-1 year of age. Our primary finding was that some studies used purported MSE measures that assessed closely related concepts, not MSE. In addition, we found there were some age range limitations, with some instruments only designed for use with mothers of infants between 0-5 months, while others extended into childhood. Finally, the preponderance of MSE measures emerging from Western and/or English-speaking cultures/countries identifies an important gap in the literature. Future research will benefit from: a) clear alignment between MSE and the instrument used to measure that phenomenon; b) wider inclusion of mothers at varying ages; and c) further development and testing of MSE instruments outside of Western and/or English-speaking cultures/countries.

Postpartum Depression Screening at Well-Child Visits: A Systematic Review.

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Introduction: Postpartum depression (PPD) is a significant public health concern. Noted as the most common medical condition affecting new mothers in the postpartum period with a prevalence of 13% to 20%, it is estimated that 50% of PPD cases are never diagnosed. In addition to concern surrounding maternal mental health is the recognition that the impact of PPD extends to the developing infant and family system. Infants whose primary caregiver experience PPD are at risk for interruptions in attachment, behavioral and social concerns, developmental delays, and adverse childhood experiences (ACEs) that are associated with poor adult health outcomes.

The American College of Obstetricians and Gynecologists (ACOG) recommends a comprehensive emotional wellbeing and mood screening for all postpartum patients, however 40% of new mothers do not attend a postpartum visit. Organizations including the American Academy of Pediatrics, Centers for Medicare and Medicaid Services, the National Association of Pediatric Nurse Practitioners and Mental Health America have advocated for routine PPD screening in pediatric primary care settings. The American Academy of Pediatrics (AAP) recognizes physicians, nurse practitioners or physician assistants as actively participating in the role of pediatric primary care providers. However, between 2004 and 2013, the rate of maternal depression screening completed by pediatricians only increased from 13% to 44%.

The prevalence and long-term impacts of PPD support the need to further investigate PPD screening practices in the pediatric setting. Therefore, the objectives of this systematic review were to identify and evaluate the barriers and facilitators of screening for PPD at well-child visits in the United States as evidenced by evaluation of current programs, quality improvement projects and pilot programs. The population focus for this review are pediatric providers, the outcome of interest is utilization of screening tools and screening practices for PPD in the pediatric well-child setting.

Methods: A systematic review was conducted utilizing the PRISMA as a guideline in the months of June-August 2021. Five databases, PubMed, PsychInfo, Web of Science, CINAHL, and Cochrane Library were identified as the primary databases. The index terms included were: *postpartum depression*, *screening*, *well child*, and *pediatric* in various combinations. Additionally, there will also be a review of references for included manuscripts, citations of individual manuscripts and a search of grey literature including abstracts, white papers and conference submissions in order to search for additional applicable sources for inclusion.

Results: The data from this review are currently under analysis. A manuscript for submission is estimated to be completed by March 2022.

Implication for Practice: A comprehensive understanding of barriers and facilitators to PPD screening in pediatric well-child visits as well as analysis of programs which implemented this practice will allow the opportunity for further growth in PPD screening. Improved screening for PPD in this setting will result in improved infant health outcomes as well as improved maternal mental health.

Provider Bias Related to Substance Use during Pregnancy.

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Introduction: Substance use during pregnancy is a public health concern that has implications on practice and healthcare utilization in the United States. Screening for substance use should be initiated with the first prenatal visit, however many women with substance use disorder (SUD) will decline prenatal care. This declination is often due to the fear of possible punitive action, shame, and feeling ostracized. These feelings have been supported in the literature. Previous studies have suggested that some physicians feel substance use during pregnancy should be viewed as "child abuse" and the child should be removed from the home. Additional studies have suggested that bias may influence nursing care when infants present with neonatal abstinence syndrome (NAS) due to in utero substance exposure. NAS may lead to a spectrum of withdrawal symptoms and the high level of care required for infants with NAS has a direct impact on the amount of time the infant is hospitalized, often resulting in longer hospitalization stays than those of unexposed infants. Studies with mothers have exemplified that during increased time in spent in the hospital, nurses have practiced bias-driven care.

Within Montana, the overall use of substances has dramatically increased, having a direct impact on the number of women who utilize substances while pregnant and thus, the number of infants born with NAS. The purpose of this study was to gain a better understanding of Montana providers' knowledge, attitudes, and practices related to caring for pregnant women who utilize substances. This was accomplished through the use of the knowledge, attitude, and practices (KAP) framework. The KAP framework has been utilized in research to better understand the driving factors behind practice in order to better implement public health interventions.

Methods: A survey using knowledge, attitudes, and practice (KAP) principles, structured off a previously utilized survey developed by Munoz, Suchy and Rutldege, was distributed to two listservs housed by Project ECHO AIP and the MOMS grant. These listservs contain multiple provider types including nurses, physicians, social workers and additional professionals within the field of maternal/child health. A total of 773 surveys were distributed. Two reminder emails were sent on days 2 and 7 following the initial distribution. A total of 97 responses were received, at a response rate of 12.5%.

Results: Data is currently under analysis with a manuscript proposal anticipated by March, 2022.

Implication for Practice: Given the dramatic increase of substance use during pregnancy and subsequent incidence of NAS, providing adequate and supportive care to this vulnerable subset of the population is paramount. Understanding provider practice across various disciplines, based on attitudes and knowledge will guide opportunities for improving proving prenatal care of women who use substances, and the health outcomes of their infants.

Pregnancy in U.S. Immigration Detention: Listening to Migrant Women's Experiences

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Scholars of the United States immigration detention and deportation systems have noted the profound effects that detention, deportation and family separation have on family structure and parental rights, arguing that immigration enforcement can function as a form of *reproductive oppression*. The most direct intersection of immigration policy and reproductive oppression may be the incarceration of pregnant immigration detainees. In 2018 (the most recent data available) the number of pregnant people detained by U.S. Immigration and Customs Enforcement (ICE) 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. Pregnant immigration detainees may also have experienced violence and trauma in their home countries and throughout their journeys to the United States, with profound impacts on their reproductive health. The purpose of this study is to document and analyze the experience of pregnancy in United States immigration detention in order to answer the following research questions:

1. What is the experience of pregnancy in immigration detention in the United States?
    1. Do pregnant detainees receive adequate medical care, nutrition, and accommodation for pregnancy, including access to abortion?
    2. What does it mean to women to be detained while pregnant? How do women understand, analyze, and situate their experiences?
2. What can the experience of pregnancy in immigration detention tell us about the intersecting systems that affect migrant women's lives and health?
3. Reflecting on experience of pregnancy in detention as expressed by participants, what policy changes should nurses, midwives and others advocate for?

Two primary substantive content theories, *necropolitics* and the twin concepts of *reproductive justice/reproductive oppression* framed the literature review for this study, bringing the work of scholars of migration and border politics into conversation with work of scholar-activists of the reproductive justice movement to shed light on the experience of migrating while pregnant today. This study uses 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. Because the core study population experiences many intersecting oppressions, it was important to select a methodology based in a critical analysis of power relations. Data collection began in the spring of 2020 and is ongoing. The study interviews, informed by Latinx feminist interviewing methods such as *plática* and *testimonio*, are conducted remotely due to the COVID-19 pandemic. With a poster presentation, I will be able to share insights from the integrative literature review, practical information regarding adapting qualitative methods during a pandemic with flexibility and rigor, research findings from the interviews, and preliminary implications for nursing and midwifery practice and policy advocacy.

Funding: UNM Feminist Research Institute Graduate Student Research Grant; UNM Graduate & Professional Student Association Student Research Grant; Jonas Nurse Leaders Scholarship Program

Provider Perspectives: Supporting Perinatal Women with Opioid Use Disorder

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Background: Facilitating successful maternal-newborn involvement and postpartum care is critical for improving outcomes for high-risk perinatal women receiving opioid agonist therapy and their newborns experiencing Neonatal Abstinence Syndrome (NAS). Despite the clear need for comprehensive education strategies to prepare high-risk pregnant women for navigating the perinatal period, no such education strategies exist.

Purpose: To identify facilitators to successful care of perinatal women in treatment for opioid use disorder and their infants experiencing NAS from the perspective of healthcare providers.

Method: Ten healthcare providers (nurses, physicians, and physician researchers) who care for perinatal women receiving opioid agonist therapy and their infants experiencing NAS were interviewed using semi-structured and open-ended questions. Data was collected and analyzed using descriptive qualitative content analysis. Robust and rich themes from participant responses were derived from the data. The research team considered and agreed on data saturation, rigor, reliability, and validity.

Results: One overarching theme developed from providers was needing to clearly communicate expectations to perinatal women so these women can be empowered with knowledge and tools to navigate the perinatal period and care for themselves and their infants. In addition, six sub-themes arose from the providers to include: 1) CPS/social worker involvement, 2) NAS specific care, 3) empowering perinatal women, 4) maternal self-judgement and judgement from others, 5) healthcare providers shaping experience, and 6) postpartum maternal self-care.

Conclusion: Providers highlighted the importance of communicating expectations in a way that empowers women and recognizes the vulnerable position these high-risk perinatal women are in. Maternal focused education is needed for pregnant women receiving opioid agonist therapy on what to expect during pregnancy and postpartum to better support the mother-infant dyad.

Funding: This work was supported by funding from the National Institute on Drug Abuse (K01DA051780, PI; Burduli). This funding source had no other role other than financial support.

Spontaneous Active Labor and Second Stage Duration with Minimal Medical Intervention

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Purpose: Our purpose was to characterize normal active labor and second stage durations in a large, contemporary sample experiencing minimal intervention.

Background: There is longstanding belief that labor duration is important for differentiating normal from abnormal labor and that detecting 'prolonged labor' is critical for determining when to intervene. Friedman's 1950s research aimed to characterize normal labor duration and proposed thresholds when labor duration shifts from normal to prolonged. There are multiple acknowledged limitations to this science, including high rates of intervention in the 1950s samples (e.g., 55% of nulliparous women delivered via forceps). Friedman's curve greatly influenced labor management practices, including contemporary clinical care provided by labor and delivery nurses and nurse-midwives. Interventions to hasten birth are now ubiquitous, challenging contemporary study of normal labor duration as it is difficult to identify a sample in which intervention is minimal. Characterization of normal vs. abnormal labor duration from the 1950s has widely shaped partographs that directly impact labor care and rates of intervention for millions of birthing people worldwide. Labor dystocia ('prolonged labor') is the indication for more than half of all primary cesareans in the U.S.

Methods: Secondary analysis of national, validated MANA Stats data registry (n = 75,243), prospectively collected 2012-2018 to describe labor and birth in settings absent common obstetric interventions [oxytocin, cesarean].

Results: Compared to multiparous (G1+) women (n = 32,882), nulliparous (G0) women (n = 15,331) had significantly longer active labor [median 7.5 vs. 3.3 hours; $p < 0.001$] and second stage [median 1.1 vs. 0.2 hours; $p < 0.001$].

Interpretation: Contemporary U.S. women with low-risk pregnancies who intended birth in settings absent medical intervention and in spontaneous labor with a live, vertex, term, singleton, non-anomalous fetus experienced labor durations that were often longer than prior characterizations. The median duration of G0 active labor was nearly twice as long and the 95th% more than three times longer than 1955 estimates [median 7.5 vs. 4.0 hours; 95th% 34.8 vs. 11.7 hours]. These durations were also longer than recent estimates [a 2018 systematic review estimated a range of 3.7 – 5.9 hours for G0 active phase]. The duration of G0 second stage was slightly longer at the median and more than twice as long at the 95th%, compared to 1955 estimates [median 1.1 vs. 0.8 hours; 95th% 5.5 vs. 2.5 hours]. Median G1+ active labor durations were 1.5 hours longer than 1956 estimates but 1.6 hours shorter at the 95th% [median 3.3 vs. 1.8 hours; 95th% 12.0 vs. 13.6 hours]. G1+ second stage durations were similar to prior estimates. Findings suggest that G0 active phase may be longer than previously understood when interventions to hasten birth are rare. Second stage duration estimates are consistent with prior research. Results overcome prior and contemporary labor progress sampling limitations to refine understanding of normal labor durations. These findings offer an important challenge to current Labor and Delivery nursing and nurse-midwifery labor duration practice patterns. This line of inquiry will be further strengthened via replication studies with more diverse samples.

Funding: Innovations Small Grant, Oregon Health & Science University School of Nursing The Association Between Length of Labor and Increase in Maternal/Child Risk (role: PI)

The Lived Experience of Lay Midwives' Experience with Preeclampsia in Urban Guatemala

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Aims: To explore the lived experience of lay midwives' response to preeclampsia in urban Guatemala. Objectives were to examine urban lay midwives' knowledge, practices and attitudes regarding preeclampsia.

Rationale: Preeclampsia is among the leading causes of maternal death in Guatemala. Lay midwives attend the majority of births at home in their country where the maternal mortality rate is highest in Latin American at 95 deaths per 100,000 births. Guatemalan lay midwives lack knowledge about obstetrical emergencies. In particular, there is a paucity of data regarding Guatemalan lay midwife knowledge regarding preeclampsia.

Background: A focus groups took place at a Refuge International health clinic in San Raymundo, nearly 20 miles northwest of Guatemala City. Refuge International is a non-profit organization with a local board that has maintained four health clinics in Guatemala for two decades. A University of Utah Internal Review Board gave the study an exempt status. The Primary Investigator is a Doctor of Nursing Practice, Certified Nurse Midwife, Women's Health Nurse Practitioner, and associate professor who has been conducting focus groups periodically in the U.S. and Guatemala for more than a decade

Design: A qualitative descriptive approach was used

Methods: The focus group was conducted in Spanish by the Primary Investigator and translated into Kachiquel by a Refuge International volunteer. The Primary Investigator sought clarification for unclear comments, noted strong opinions, agreements or disagreements, and moved along the discussion when saturation was reached on a particular topic. The Primary Investigator also took field notes during and after the focus group, and documented input from Refuge International volunteers about observations from focus group discussions. The focus group was audio taped in Guatemala and translated in the U.S. by a University of Utah-endorsed translation and transcription service using cross-cultural strategies of and transliteration. Nivo was used to develop a matrix of common themes. The COREQ Checklist was followed to report qualitative findings.

Results: Eleven lay midwives participated in the 35-minute focus group. Six themes emerged. First, urban lay midwives knew some signs of preeclampsia, such as headache, blurred vision, and nausea and vomiting. Second, urban ay midwives did not know signs of preeclampsia, such as right upper quadrant pain, hyper reflexes, and peripheral leg edema that is worse at night. Third, urban lay midwives knew normal blood pressure was 120/80 and hypertension was 140/90. Fourth, they did not know how to take a blood pressure or have the equipment to do so. Fifth, urban lay midwives know pregnant mothers with preeclampsia can seize, and the mothers and their fetuses can die. Sixth, urban lay midwives did not know they should place pregnant mothers with preeclampsia on their left sides while transporting them to hospitals for emergency care.

Implications: Urban lay midwives have a basic understanding of preeclampsia, and could better protect pregnant patients from this deadly disease if urban lay midwives had a more complete understanding of preeclampsia, knew how to take a blood pressure measurement, and had the equipment to do so.

A Conceptual Analysis of Irritability

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Purposes/Aims: The purpose of this concept analysis was to explore the concept of irritability, its definitions, defining characteristics, antecedents, consequences, and empirical referents.

Description of Theory or Definition of Concept to Be Discussed: Irritability is broadly defined as an excessive reactivity to negative emotional stimuli, which manifest with affective (i.e., anger) and/or behavioral (i.e., aggression) components. Irritability is a transdiagnostic symptom, implying it is a shared symptom among different forms of psychiatric disorders (e.g., mood, anxiety, personality, and substance use disorders). It is also relevant to nursing care as several nursing diagnoses include irritable mood or unexplained irritability as their defining characteristics (e.g., impaired swallowing, impaired mood regulation, anxiety, disorganized infant behavior). As a result, nurses may encounter irritability across healthcare settings. While irritability is a commonly used term in public and clinical settings, there are diverse conceptualizations about this concept and the ways it is distinguished from anger and aggression, resulting in lack of conceptual clarity.

Internal Consistency of the Theory Developed, Conceptual Approach, or Process Used: The strategy put forth by Walker and Avant (2019) was used to conduct the concept analysis. This strategy incorporates the following eight steps for examining a concept: (1) select a concept (2) determine aims or purposes of the analysis (3) identify all uses of the concept that one can discover (4) determine the defining attributes (5) identify a model case (6) identify borderline, related, contrary, invented, and illegitimate cases (7) identify antecedents and consequences and (8) define empirical referents.

Logic Linking the Theory or Concept to Nursing Practice or Research Problem: Practicing nurses such as registered nurses and nurse practitioners in psychiatric/mental health, pediatrics, medical-surgical, intensive care, and other settings may encounter patients exhibiting irritability on a daily basis. Understanding the nature and root causes of these symptoms may help nurses address their patients' needs more effectively. Therefore, it is important for nurses to recognize common concepts/constructs that their patients experience.

Conclusions, including a Statement about the Utility of the Theory or Concept for Nursing Practice or Research: According to the eight-step strategy, we identified primary definitions and physiological uses of irritability, as well as irritability uses in nursing care, psychology, and psychiatry. The findings showed that irritability appears to be a distinct concept and may be differentiated from anger and aggression by defining attributes such as unpredictability, oversensitivity, variable duration, variable trajectory, and unspecified outcomes. Then, we identified irritability using model cases and explored its antecedents, consequences, and empirical referents. Most importantly, irritability can act as a predictor for future psychiatric disorders. Considering the presence of irritability in multiple nursing diagnoses and settings, it is crucial for nurses to recognize and successfully identify this concept in the nursing care they provide in diverse settings and patient populations. At the same time, nurse researchers can facilitate developing and testing care models targeting patients who demonstrate high irritability.

All Things Trauma and Mental Health: An Experiential Learning Project

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Purposes: The purpose of this project was to create a website including written information, videos, and a podcast to provide resources for patients and families who have experienced these issues.

Background: It is common for those who have experienced physical or emotional trauma to also experience mental health issues. For example, those who have had a traumatic brain injury are at increased risk for suicide or those who have suffered childhood trauma are at increased risk for post-traumatic stress disorder as an adult.

Methods: Five undergraduate nursing students and one communications major were hired as research assistants using experiential learning funds. One nursing student was placed in charge of organizing the project and leading the team in consultation with the faculty member. The team determined topics to be covered for the initial year of the project and a timeframe was developed. One student was assigned to develop the website, others to write short articles for the website. A team of students, including a communication student was formed to create videos addressing the monthly topics. Resources from the college of nursing were sought to assist with creating the podcast portion of the project. The plan was to publish one website article, create one video, and one podcast per month.

Results: The website was developed as well as an article and video, addressing the topic of suicide prevention in those who have had traumatic brain injuries. The initial podcast covered resources for college students who suffer from mental health issues. The website and podcast went live in October 2021.

Implications for Nursing: This project has allowed nursing students to research and develop media for those who have suffered from traumatic injury and mental health issues. It has provided them the opportunity to learn new skills in website development, video production, writing, and podcast production. It also allows students to learn about trauma and accompanying mental health issues with the goal of providing up to date information for those suffering from these problems.

Conclusion: The students continue to develop articles, podcasts, and videos for patients and families who have suffered trauma and mental health issues.

Correlates to the Use of Tele-Mental Health Services and Immigration-Related Factors

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Purpose: This study aimed to identify predisposing, enabling, and need factors for the use of tele-mental health services.

Background: The use of tele-mental health services has increased over the past 15 years and has expanded more extensively amid the COVID-19 pandemic. This study used the Gelberg-Anderson Behavioral Model for Vulnerable Populations to Health Services Utilization as a conceptual model. Immigrants are an understudied population with historically limited access to mental health services, and telehealth may be a novel approach to reduce access disparities.

Methods: This study analyzed secondary data from the California Health Interview Survey (CHIS) 2015-2018, with an overall sample size of 83,366 immigrant and non-immigrant adults 18 years and older. The dependent variable was the use of telemedical services for mental health concerns in the past 12 months. Our covariates include need factors (psychological distress, and perceived need for mental health care), enabling factors (poverty level, insurance status, internet use, rural status, citizenship status, and acculturation), and predisposing factors (age, sex, education, employment, generation status). We performed univariate logistic regression analysis for each explanatory variable and multivariate logistic regression adjusting for covariates.

Results: Among the analytic sample, approximately 51.2% were female, 12.7% were between the ages of 18-24, 33.5% were age 35-54, 16% were 55-64, and 50.5% were over the age of 65. The sample includes Hispanic (35.8%), Non-Hispanic White (NHW) (41.3%), African American/Black (5.6%), Asian (14.4%), Native Hawaiian/Pacific Islander/Other (2.5%), and American Indian/Alaska Native (0.4%) adults. Approximately 9.1% were uninsured, 90.9%, 14.8% were non-citizens, 32.4% were foreign-born, 20.4% were 2nd generation immigrants, 30.5% were less acculturated, and 14.9% had limited English language proficiency level. Approximately 1.3% of the analytic sample reported use of tele-mental health services. Bivariate analysis showed lower odds of use of tele-mental health services among older age groups, Hispanic and Asian adults, non-citizens, and adults with limited English-language proficiency (p<.005). Identifying as female, being employed, being born in the U.S., and having higher level of acculturation were significantly associated with the use of tele-mental health services compared to other relative groups (p<.005). In the multivariate model, the need factors of low level of psychological distress [adjusted odds ratio (AOR)= 0.43, 95% confidence limit (CI)= 0.30, 0.61, p<0.001] and perceived need for mental health care [AOR=7.97, 95% CI= 5.40, 11.75, p<0.001] were significantly associated with the use of tele-mental health services.

Implications for Further Research: The results show the importance of examining need-related factors to promote mental health services utilization, independent of predisposing and enabling factors. The expansion of technology in providing mental health services for emotional, mental, or drug-related problems is a practical approach to help address access barriers for diverse populations. Further research exploring immigrants' use of tele-mental health services is warranted. This study supports the need to examine differences in factors to mental health service use comparing immigrant and non-immigrant groups.

Funding: National Clinician Scholars Program, University of California, Los Angeles Clinical Research Education and Career Development (CRECD), Charles R. Drew University Urban Health Institute

Discrimination and Health Among Chinese Americans and Immigrants amid COVID-19

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Purpose: This presentation aims to examine the relationship among resource availability, relative risk, COVID-19 preventative behaviors, health status, and healthcare seeking including vaccination intent and uptake during the COVID-19 pandemic among Chinese Americans and immigrants.

Background: The recent COVID-19 outbreak has a negative impact on all communities in the U.S. and globally; however, it has disproportionately affected some more than others. Increases in anti-Asian discrimination and violence experienced among Chinese Americans and immigrants amid COVID-19 can have profound short- and long-term impacts on their health. Empirical evidence shows that anti-Asian discrimination has been associated with higher levels of generalized anxiety and depressive symptoms in this population. This timely and time-sensitive project will address health disparities associated with COVID-19 pandemic in our target population.

Methods: This presentation will conduct a secondary data analysis of Wave I subgroup data (collected in Summer/Fall 2021) from a longitudinal study targeting Asian Americans and immigrants in the U.S. The Wave I online survey includes valid and reliable measures assessing discrimination, relative risk, COVID-19 preventative behaviors, health status, and healthcare seeking including vaccination intent and uptake during the COVID-19 pandemic. The online survey was administered on a secure web-based data collection platform, REDCap. The survey took approximately 15 minutes to complete; each participant received $10 for the time and effort.

We will use descriptive statistics (e.g., mean, standard deviation) to describe major characteristics of the target populations. Student *t*-test and chi-square (χ^2) test will be used to compare key variables between subgroups. Multiple and logistic regression will be performed to investigate the associations among independent (e.g., sociodemographic characteristics, racial/ethnic discrimination, perceived risk, social support) and dependent variables (preventive behaviors, health, and health care seeking behaviors including vaccination intent and uptake).

Results: Data analysis will be completed by the end of December 2021.

Implications: This proposed study will contribute to the scant evidence of the impact of the prolonged pandemic on health and wellbeing among Chinese Americans and immigrants, by presenting an overview of their experience and responses to the crisis and influencing factors. The findings will help to raise the awareness of the needs of our target population, so timely and culturally congruent interventions and resources can be allocated to reduce the negative impacts of this outbreak and better support them in combating the pandemic and related discrimination.

Funding: National Science Foundation Hazards Research Award

Experiences and Perspectives of Women Who Attend Dance Fitness: A Qualitative Study

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Purpose: Physical inactivity is a growing concern among women, due to *perceived barriers to physical activity* (PA) participation. Physical and psychological consequences to physical inactivity for women are far reaching, thus approaches to enhance PA in women are urgently needed. Dance fitness is a suitable form of PA for women that may address some barriers to PA. OULA (named after MissOULA, Montana) is an example of dance fitness, and it includes a high-energy dance workout that uses intentional choreography to combine the therapeutic use of dance to promote emotional expression with PA. Research involving OULA shows that reasons for attending OULA are exercise, improved mood, and fun, and that 12-weeks of OULA participation is associated with a decrease in depression and anxiety in women. However, there is a *gap in knowledge* regarding how individuals perceive or experience OULA, which is important information to gain specific to how dance fitness might be used to improve PA levels in women. Therefore, the aim of this study was to explore the perspectives and experiences of OULA in women.

Approach: The intent of a qualitative descriptive design is to capture rich descriptions of a particular phenomenon and interpret findings within the context of the data, to allow for a comprehensive summary of the who, what, and where. As such, a *qualitative descriptive design* aligns with the aim of this study to learn about the perspectives and experiences of OULA in women currently participating in OULA.

Setting: Guided by Streubert and Carpenter, semi-structured interviews conducted via videoconferencing (WebEx). Given that OULA is available across the United States, the rationale for conducting videoconferencing interviews was to allow for a more representative sample of OULA participants.

Participants: Purposive and snowball sampling were used to recruit women living in the United States and currently active in OULA.

Method: Recorded interviews were transcribed using an online transcription service. Transcripts were verified and read multiple times. Content analysis of the de-identified transcripts were conducted in Dedoose and coded independently by two researchers and discussed until consensus was reached. Lincoln and Guba's criteria were followed to ensure trustworthiness of the data.

Results: Twenty women (mean age=38.2±7.8, 90% Caucasian) currently active in OULA (mean years participation=4.0±3.2) enrolled. Predominantly, women lived in Minnesota (40%, n=8). There were no new inductive codes after 14 transcripts; however, to ensure saturation had been achieved, we coded all 20 transcripts. Themes identified were: 1) emotional expression; 2) life management; 3) community / social connections; 4) judgement-free; and 5) life skills.

Conclusion: OULA appears to be a dance fitness format that incorporates physical, psychological, and social health and offers a judgement-free atmosphere. Skills are learned in OULA that are used in other areas of life. The findings from this study may provide insight when developing interventions and/or fitness programs to improve PA among women by potentially addressing some of the perceived barriers to physical inactivity.

Implementing Measurement-Based Care in an Outpatient Mental Health Clinic

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Purpose: The purpose of this quality improvement project is to implement and evaluate the effectiveness of a specialized measurement-based care (MBC) software to improve client outcomes at this outpatient mental health clinic.

Background: MBC in psychotherapy is an evidence-based intervention that involves routinely monitoring client-reported outcome measures and progress over time with incorporation of feedback into sessions. At a large suburban outpatient mental health clinic (OMHC), therapists have no centralized method of measuring symptom changes that provides immediate analysis to show detailed change or client progress; therefore, feedback cannot effectively be incorporated into sessions.

Approach: Bandura's Self-Efficacy theory was utilized as the theoretical framework for this project. Complex Innovation Implementation Conceptual Framework was used as the implementation framework.

Methods: Following the launch of the software in April 2021, initial facilitators and barriers to implementation were assessed. Therapists were trained on the software prior to launch. Mandatory assessments to be completed within the software were for depression (PHQ-9), anxiety (GAD-7), and therapeutic alliance (WAI-BR) every four or six weeks determined by frequency of sessions. Beginning in September 2021, educational interventions on MBC and peer-to-peer supportive consultations were integrated into staff meetings and collaborative education sessions, facilitated by change champions. Changes in software utilization and aggregated outcomes were tracked by collecting data weekly from August through December 2021.

Preliminary Findings: Halfway through implementation, 82% of new clients were enrolled in the software. 45% of assigned assessments were completed by the client. Clinical symptoms modestly improved over the initial four months of psychotherapy treatment. Weekly clients archived from the software, indicating discharge, did not exceed 2%.

Preliminary Conclusions: Therapists are enrolling clients in the software, but client utilization is low. Utilization of the MBC software for progress monitoring has not significantly affected client outcomes at the OMHC at this point in the project. Complete data will be analyzed when this project is complete. This project is applicable and relevant to nursing because MBC may be used in mental health treatment provided by psychiatric-mental health nurses and APRNs.

Measurement of Stress Among Accelerated Second Bachelor of Science in Nursing Students

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Purpose: The purpose of this study was to measure the perceived stress among Accelerated Second Bachelor of Science in Nursing (ASBSN) students over the course of a 12-month program.

Background: Due to the high demand for registered nurses, many collegiate nursing programs are creating accelerated programs to increase student enrollment. As accelerated programs are relatively new, it is essential to obtain data on this population of nursing students. Nursing students experience higher levels of stress than students in other health sciences. Nursing students in accelerated programs experience consistently higher levels of stress than their counterparts enrolled in traditional programs. Stress may lead to poor academic performance, student withdrawal from programs, changes in health, and may negatively impact the quality of patient care provided.

Methods: This study employed a descriptive longitudinal design to measure perceived stress using the perceived stress scale (PSS), where higher scores reflect higher levels of personal stress, over the course of a 12-month ASBSN program. Student participants were recruited using convenience sampling. ASBSN students completed the PSS during three key points in the program: start of the program (baseline time 1), at the end of the first semester (time 2), and at the end of the summer semester (time 3). One more datum collection point will be collected at the end of the program in December 2021 (time 4). Scores from the PSS were calculated, and a one-way repeated measures ANOVA was performed using StataIC 16 software.

Results: A total of 24 students completed the PSS at the first three data collection points. Of the 24 students 17% identified as male and 83% identified as female. A one-way repeated measures ANOVA was run on the sample to determine if the scores differ over the course of the accelerated program. The first PSS mean was 14.67 with a standard deviation of 6.64 ($n = 24$). The second PSS mean was 16.46 with a standard deviation of 8.13 ($n = 24$). The third PSS mean was 15.71 with a standard deviation of 7.32 ($n = 24$). The results indicated that there was a statistically significant difference in mean scores between the participant's PSS at the beginning of the program (time 1), end of the first semester (time 2), and end of the summer semester (time 3) (p-value = 0.0010). After the final data collection a one-way repeated measures ANOVA will be calculated again.

Implications for Translation to Practice and Future Research: Perceived stress among undergraduate Accelerated Second Bachelor of Science in Nursing (ASBSN) students increases during the program. Limitations of the study include the small sample size and the lack of a comparison group. More research is needed to facilitate stress management strategies among ASBSN students. Future randomized-controlled trial studies should examine the implementation of stress reduction techniques among ASBSN students to inform nursing faculty and students on stress reduction techniques during accelerated programs.

Mental Health First Aid Training for Custody Officers

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Background: Since the deinstitutionalization of mental health (MH) patients in the late 1970's, there has been a massive influx of psychiatric patients into correctional facilities. There are now three times more MH patients in correctional facilities than in hospitals across the country. Custody officers (CO) have minimal training in MH despite encountering incarcerated individuals with a psychiatric diagnosis daily. These daily interactions place CO's in a pivotal position to support and provide care for individuals with MH concerns. It is reported that Custody officers have requested training in MH yet required MH training for CO's remains rare. Past research shows that MH training for CO's has universal benefits. Custody officers with MH training report fewer MH issues, higher job satisfaction, and less burnout. Research shows that MH training for CO's has decreased violence on the units and has improved interactions with MH patients, thus improving MH inmates' outcomes. Despite these known benefits, presently, CO's who wish to receive MH training, must identify, purchase, and participate in training without employer financial support. The Mental Health Literacy Scale (MHLS) was created by Dr. O'Connor and Leanne Casey and is a likert-type scale that provides quantitative interval data. This scale was generated to evaluate knowledge, beliefs, and behaviors around MH. It has consistently shown greater MH literacy in MH professionals and those who have had direct or indirect experience with MH issues versus those who have not. It has also shown effectiveness in evaluating MH interventions intended to improve MH literacy. For this project, the MHLS will be used to evaluate CO's MH literacy before and after MHFA training.

Purpose: The purpose of this quality improvement pilot project is multifaceted. It will take place at a state correctional complex on the segregation, observation, and residential treatment units where the majority of MH inmates are retained at this facility. This project will determine if training CO's in Mental Health First Aid (MHFA) at a state correctional complex will (1) help to increase their MH literacy scores and (2) decrease the amount of "use of force" incident reports filed on the participating units.

Methods: Recruitment will occur via distribution of flyers and encouragement to participate among all CO's by the superintendent of these units. A sign-up sheet with options for training times will be emailed to the CO's who have expressed interested. Three to four opportunities for an in-person, eight-hour, MHFA training session will be provided to CO's working on the participating units. The MHLS will be provided via email immediately pre and post training as well as one, two, and three months post training. The "use of force" incident reports will be counted for the three months leading up to the first MHFA training session and compared to the number of "use of force" incident reports three months post training to evaluate for differences.

Funding: HRSA ANEW Grant T94HP30874

One "Mindful Minute" to Reduce Burnout Among Psychiatric Nurses

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Background: Nursing is a fast-paced, high-stress profession. Psychiatric nurses experience a higher level of occupational stress comparing to their colleagues. Chronic exposure to occupational stress can lead to burnout. Burnout is associated with poor physical and mental health, low retention rate, compassion fatigue, decreased quality of care, and, most importantly, can affect patient safety. With COVID-19, nurses are at an even increased risk for burnout. While emerging interventions address nurses' burnout, they usually have a high demand for time and resources. There is an urgent need to explore stress-reducing interventions with minimum time and resources that nurses can easily access and practice daily.

Purpose: This presentation will describe the results from an eight-week stress-reducing intervention, "MindFull Minute," among psychiatric nurses. These results will provide information to guide the future design of similar interventions.

Method: This project will employ a mixed-methods design, including a quantitative pre- and post-intervention assessment and a qualitative post-intervention experience survey. An initial pre-recorded educational session will be provided to participants via their work email. The aim is to educate participants to be mindful of their current being or doing. They will be encouraged to practice this mindful skill at least one minute a day, namely "MindFull Minute." The goal is for nurses to eventually form a natural habit and utilize mindfulness in their daily conduct. The instrument will be used in the project is the Maslach Burnout Inventory (MBI).

A group of psychiatric nurses will participate in the eight-week "MindFull Minute" project. After reviewing the education information, they will be asked to complete the MBI. Following that step, they will start to practice mindfulness during their shift. Their practice will be tracked using a tracking card. The primary investigator will check on the participants on a biweekly basis. They will be asked to complete the MBI one more time and fill out a post-intervention feedback survey at the end of week eight. The pre- and post-MBI score will be analyzed by paired-sample t-test.

Funding: #T94HP30874 HRSA

Stigma of Mental Illness Among US Based African Immigrant Healthcare Providers

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Purpose: The purpose of this systematic review was to explore stigmatization towards mental illness among African immigrant healthcare providers in the US.
Background: African immigrant healthcare providers form a significant percentage of mental health providers in the US and the proportion is growing. Between 2006 and 2015, the population of African immigrants grew from 1.5 million to 2.1 million. A third of this population work in the healthcare workforce. Previous studies have shown that there is increased stigma in African countries and healthcare providers share stigmatizing beliefs towards people with mental illness. In the US, 51.5 million people were impacted in 2019. Of these people, 55.2% did not receive treatment in 2017.
Method: Systematic search was conducted for this literature review using PubMed, PsycINFO and CINAHL databases with keywords of stigma, attitudes, mental illness, mental disorder, nurses, healthcare provider, Africa, perceptions, stigmatization, healthcare professional, African healthcare providers. **Inclusion criteria:** (i) Study conducted in Africa and other low-income countries with similar demographics (ii) focused on healthcare providers or nurses. (iii) Attitudes (iv) Stigmatization or Stigma (v) in the last 10years (vii) written in English. **Exclusion criteria** were (i) nursing students (ii) other comorbidities (iii) >10years. Searches using keywords yielded a total of 63 articles: however only 16 met the criteria. All articles were evaluated for their quality using the CCAT Tool, but because there were few articles in this area of interest, all meeting inclusion criteria were Included in the review. The Mental Illness Stigma Framework (MISF) was used to frame the results which focused on the stigmatizer use of stereotypes, prejudice, and discrimination in care of individuals with mental illness.
Results: This review suggests stigmatization of people with mental illness is universal. The publications estimate that up to 75% of people with mental illness are unable to receive the care and treatment they deserve because of stigma and sociocultural beliefs that exist in Africa. There is significant relationship between stigma of providers, quality of care, and health outcomes for persons with mental illnesses. Based on MISF, the perspective of the stigmatizer manifested as stereotypes, prejudice and discrimination often result in crippling outcomes such as social rejection which undoubtedly requires public policy support. Failure to do this will result in over 50% of this vulnerable population remain socially rejected and unable to fulfil their potential. To address this treatment gap, it is imperative to assess stigma and its correlates among US based African immigrant healthcare providers.
Conclusion: The long-term goal of this is to design interventions that will enhance reduced stigma towards people with mental illness in the US and Africa, while incorporating culture into these interventions. The outcome of this systematic review has potential to increase the proportion of people with mental illness who receive care, reduce or eliminate stigma towards people with mental illness among US based African immigrant healthcare providers, and improve competence and higher quality of care of the vulnerable population.

The Effects of Motivational Interviewing on Retention in Opioid Use Disorder Treatment

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Purpose/Aims: The purpose of this study is to determine the effect of one targeted, individual motivational interviewing (MI) session focused on treatment retention for individuals in a program that uses medications for opioid use disorder (MOUD). If effective, these results can be used as a quality improvement tool for the project site.
Rationale/Background: Opioid overdose fatalities and related morbidities remain a significant health concern. Opioid use disorder (OUD), a problematic pattern of opioid use that leads to impairment or distress, can be successfully treated with MOUD, including methadone and buprenorphine. Many clients enrolled in MOUD programs stop attending treatment early. Research suggests early cessation of treatment may render the treatment ineffective. MI is a collaborative, patient-centered strategy that is commonly used to engage individuals with substance use disorders, explore ambivalence, and enhance motivation to change.
Methods: The study will use a quasi-experimental research design and will be conducted at an outpatient facility that specializes in the treatment of OUD. Clinic records will be reviewed to determine the average highest point in time that treatment is voluntarily discontinued by patients. Patients beginning treatment will be contacted via phone to discuss enrollment in the study. One MI session will be conducted with consenting participants. Discontinuation of treatment will be defined as a 12-day absence from treatment. Treatment retention will be assessed at one-, two-, and three-months' time from enrollment. Retention rates will be compared between the group receiving the intervention and the clinic retention rates determined before the implementation phase. Statistical software will be used to analyze data. Histograms and frequency distributions will be used to analyze the dependent and independent variables for normality. Bivariate analysis will include a chi-square test to analyze the independent and dependent categorical variables, using an alpha of 0.05. Missing information will be reported in the results.
Assessment of Findings/Outcomes Achieved: To be determined. Data collection is in progress.
Conclusion: To be determined following study completion and analysis of results.

Funding: HRSA ANEW Grant: Trainee-Related Expenses (#T94HP30874): $464.00

Viewing Perinatal Loss through a Trauma-Informed Lens

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Purpose/Aims: We aimed to accomplish the following:

1. Interpret parents' experiences through the lens of a trauma.
2. Identify possible trauma-informed interventions to mitigate the risk of developing complicate perinatal grief.

Background: In 2020, 2.4 million pregnancies ended in perinatal loss in the United States. Perinatal loss, the death of a fetus or neonate between conception and 28 days after birth, is increasingly becoming recognized as a traumatic experience. Studies report 39-49% of women experience clinically significant symptoms of posttraumatic stress following perinatal loss. Other studies report a host of adverse biopsychosocial outcomes following perinatal loss, including depression, anxiety, posttraumatic stress disorder, suicidality, substance misuse, sleep disturbance, dissolution of relationships, disrupted parenting, obesity, hypertension, diabetes, and cancer. Despite identifying the life-long impact of complicated perinatal grief, healthcare practices have yet to consider approaching perinatal loss through a trauma-informed lens. It is necessary to reframe the implications of perinatal loss in light of the long-term health burden on parents, communities, and the healthcare system.

Methods: We conducted an interpretive descriptive secondary analysis of de-identified interview transcripts of 24 participants detailing personal experiences with perinatal loss secondary to anencephaly, a life-limiting fetal condition. Interpretive descriptive analysis provides a logical framework for philosophical rationale and decision-making in scholarly inquiry and considers the multiple realities of complex human phenomena.

Results: Interview transcripts detailed the perinatal loss experiences of 20 women and four men between the ages of 18-59. Participants were White (75%) and Latinx (25%), with loss experiences occurring between three months and 12 years prior to being interviewed. Parents reported experiencing depression, anxiety, posttraumatic stress, and extreme emotional difficulty following perinatal loss. Upon learning of the life-limiting diagnosis, 71% of parents reported not being offered care options, 43.8% reported care that was incongruent with their wishes, and 75% of parents continued to experience intense grief up to 12 years after their loss. Cultural considerations were not incorporated into the care experiences of the Latinx parents in this study.

Implications for Practice: Healthcare has recently adopted a trauma-informed approach to patient care. A trauma informed-approach provides a framework which recognizes the health implications of the neurobiological rewiring that often follows a traumatic event. To improve health outcomes, it is necessary to implement a trauma informed approach to patient care following perinatal loss. Considering the delivery of a life-limiting fetal diagnosis as a "high-stakes" conversation, educating parents on available care options, allowing ample time for informed decision-making, and incorporating a multiprofessional approach to bereavement care may mitigate parents' risk of developing complicate perinatal grief. Additionally, considering the increased infant mortality rates in minority populations, it is critical to provide culturally sensitive care following perinatal loss. Nurses are ideally positioned as patient advocates following perinatal loss. By altering the care paradigm following perinatal loss, nurses may transform healthcare delivery and substantially decrease adverse biopsychosocial outcomes associated with complicated perinatal grief.

Pain and Spiritual Distress at End of Life: A Correlational Study

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Purpose: The purpose of this study is to examine the relationship between unmanaged pain and spiritual distress (SD) in adults newly admitted to hospice.

Background: Current evidence supports the presence of a positive relationship between increased physical pain and SD for those with advanced cancer and/or receiving palliative care services. Nonetheless, SD remains a relatively understudied area; anecdotally, assessment and management of physical symptoms often take precedence over interventions for SD in patients at end of life (EOL) on hospice. Further research is needed to examine the relationships between physical pain, SD, and factors such as age, gender, and religious affiliation/spiritual practice specific to EOL patients receiving home hospice care. The Total Pain Model underpins this study.

Methods: In this cross-sectional correlational study, pre-existing data were extracted from a hospice agency's electronic health record to examine age, gender, marital status, race/ethnicity, religious affiliation and/or spiritual practice, hospice diagnosis, pain severity, and SD in adult patients (age 18 and over) admitted to home hospice services (N=3484). Descriptive, bivariate, and multivariate analyses were conducted.

Results: The age range for this sample was 25 to 107 years old (M = 82, SD = 12.08). Over half of the sample were female and white. One third of the patients were married or had a designated life partner. Over 85% identified as either Catholic or Protestant. Sixteen percent reported moderate to severe pain and 9.6% experienced SD. Marital status (χ^2 (3, N = 2483) = 20.21, $p < .001$, Cramer's V = .09), hospice diagnosis (χ^2 (5, N = 3481) = 22.66, $p < .001$, Cramer's V = .08), pain severity (χ^2 (1, N = 3464) = 19.75, $p < .001$, Cramer's V = .08), and age (t (393.17) = 2.84, p = .005, d = .17) were significantly related to SD. The binary logistic model was statistically significant, χ^2 (11) = 45.25, $p < .001$, and cases indicating the highest odds of experiencing SD had pulmonary disease (OR = 1.8, p = .02), were single (OR = 1.6, p = .02), and had moderate to severe pain (OR = 1.4, p = .04).

Implications: Moderate to severe pain, marital status, and diagnosis should be considered for inclusion in a refined spiritual distress hospice admission screening process. Future research should examine the unique contributions of diagnosis in predicting spiritual distress, particularly pulmonary disease.

The Total Pain Model. Elements of the total pain experience supported by significant variables in this study (diagnosis warrants further investigation to better understand the fit within this model). The spiritual distress variable as measured in this study.

Using a Novel Unfolding Case to Integrate Contemporary Pain Concepts into a BSN Program

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Purpose: To provide conceptual understanding of pain using an unfolding case study scaffolded across a pre-licensure baccalaureate curriculum.

Rationale/Background: Chronic pain is the most prevalent disease worldwide, leading to substantial suffering, socioeconomic burden and work-related disability. Pain and related comorbidities are commonly encountered by nurses yet, there is recognition that nurses and other health professionals need a better understanding of chronic neuropathic (central and peripheral) pain and nociplastic pain. Moreover, a preponderance of evidence supports framing chronic pain as a disease rather than a symptom as it arises from self-perpetuating biological changes.

Previously we reported original evidence of pain content across four baccalaureate pre-licensure nursing programs in the Pacific Northwest from a 27-item evidence matrix based on guidelines from the International Association for the Study of Pain. We found that each institution's curriculum exceeded the Board of Nursing's recommended six minimum hours of pain management (range 13–19.5 hours). Acute, nociceptive pain was well represented in all courses. However, majority of chronic pain concepts (76-85%) were found in a single lecture, highlighting the danger of significant curricular drift if a single lecture is lost. There was limited evidence of scaffolding pain content from foundational courses to later ones. Additionally, the curriculum was silent on the transition from nociceptive to central and complex/mixed pain states or high impact chronic pain.

Brief Description of the Undertaking: Given the redundancy found in acute nociceptive pain learning and assignments, we propose that an unfolding case study could replace acute pain assignments without imposing additional curricular contact hours. Thus, faculty in consultation with simulation, clinical and course coordinators undertook an in-house pain education program including a 30-minute lecture or independent assignments based on evidence-based, freely accessible online resources.

Subsequently we developed an unfolding case study applied across the curriculum aligned with course and program student learning outcomes. The case study includes didactic content, simulation activities and NCLEX style questions in alignment with the NCSBN clinical judgement measurement. Our case starts in the first term with a patient experiencing an acute injury with nociceptive pain. In subsequent terms the patient develops chronic single site pain and eventually develops chronic widespread pain with related comorbid diagnoses (irritable bowel syndrome, headaches) and symptoms (fatigue, unrefreshing sleep, mood disturbance).

Assessment/Outcomes Achieved: Prior to developing the unfolding case study, selected faculty were asked to provide feedback to optimize faculty buy in, identify possible barriers, and allow for successful implementation. Course SLOs were used to organize pain concepts and build on throughout the curriculum to demonstrate student advancement and progress toward the end-of program SLOs. A variety of evaluation methods were selected within each course to demonstrate student learning.

Conclusion: Although our previous study found that faculty perception of a 'full curriculum' was a barrier to implementing contemporary pain concepts, integration of this novel unfolding case study allows for these concepts to be included without additional contact hours. We propose that the pain concepts taught are more reflective of what nurses are expected to assess and manage in clinical practice.

PAIN, SYMPTOM MANAGEMENT

Box Breathing Plus Enhanced Recovery After Surgery Protocols for Postsurgical Pain

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Purpose/Aim: This study aims to examine the feasibility of adding box breathing to Enhanced Recovery After Surgery (ERAS) protocols on the management of acute postsurgical pain in patients following General Surgery procedures.

Rationale: Chronic postsurgical pain (CPSP) is defined as pain that persists after the normal healing process following a surgical procedure. CPSP develops from inadequate treatment of acute postsurgical pain and is an enormous public health issue. CPSP is associated with poorer outcomes and economic hardships. Today, approximately 319 million people worldwide have surgery each year, which has increased from 235 million in 2016. On average, 2-10% of these patients experience undertreated acute postsurgical pain, translating to millions of individuals being at risk for CPSP. An effective approach for managing acute postsurgical pain is the use of ERAS protocols, which improve patient care by linking each stage of the surgical journey with a consistent perioperative plan. Given the number of patients with CPSP, a need for additional methods to combat acute postsurgical pain exists. Presently, traditional ERAS protocols do not include relaxation techniques in any stage of the perioperative process. Relaxation techniques have a profound influence on how patients experience and perceive pain. The addition of box breathing, an evidence-based relaxation technique, to the applicable ERAS protocol stages may support current efforts to better manage acute postsurgical pain.

Methods: *Design:* A randomized controlled feasibility trial. *Sample and Setting:* Patients undergoing General Surgery procedures at Mayo Clinic Florida will be recruited and randomly assigned to either receive box breathing plus ERAS protocols (experimental group, N=15) or only ERAS protocols (control group, N=15) for pain management. *Measures and Procedures:* To examine data collection feasibility, pain intensity (Numeric Rating Scale, NRS; range=0-no pain to 10-high pain) and heart rate variability (electrocardiogram, ECG strip) will be assessed when patients are arousable in the Post Anesthesia Care Unit (pre-intervention). Patients in the experimental group will be guided in performing box breathing (inhale 4 sec, hold 4 sec, exhale 4 sec, hold 4 sec; repeat four times) plus ERAS protocols, while the control group will receive ERAS protocols only. Post-intervention, patients will be asked to report their pain using the NRS, and another ECG strip will be obtained. Measures of intervention acceptability (AIM), appropriateness (IAM) and feasibility (FIM) will be assessed post-intervention (range=4-low to 20-high). *Analysis Plan:* The mean change from pre- to post-intervention in pain intensity and heart rate variability along with the 95% confidence intervals will be calculated. Frequencies, percentages, 95% confidence intervals, and mean±SE for AIM, IAM and FIM will also be calculated.

Anticipated Results: Although pending, the anticipated results will show the feasibility of utilizing box breathing in addition to the current ERAS protocols for pain management, compared to the control group.

Implications and Future Research: The addition of box breathing to current ERAS protocols is likely to improve the management of acute postsurgical pain in General Surgery patients. Future research in this area includes using box breathing for other surgical procedures to assess applicability to traditional ERAS protocols.

Implementing and Evaluating a Cannabis Shared Decision-Making Aid at a Pain Clinic

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Purpose: The purpose of this quality improvement project is to implement and evaluate a cannabis use decision aid for symptom management at a clinic that provides care to adults with chronic non-cancer pain.

Background: Pain is the most commonly reported condition for which cannabis is used by patients. Evidence related to the use of cannabis to assist management of chronic non-cancer pain is limited and findings are inconsistent. Health care providers in Washington State are in a unique position as cannabis is available for both recreational and medicinal use. This leaves patients with the option to use cannabis to manage medical symptoms, regardless of a medical cannabis authorization.

Local Problem: One third of the patients at an urban specialty pain management clinic in Eastern Washington tested positive for cannabis during routine monthly urine drug screens. The clinic lacks a standard policy to address patient cannabis use though the complex lens of pain management. The clinic health care providers have a need to actively address patients' cannabis use and initiate conversations about cannabis in a safe, evidence-based, unbiased, and non-judgmental manner.

Methods/Intervention: A cannabis shared decision-making aid published in Canada was adapted with permission for use at the partnering health clinic. Theoretical foundation for the modifications were based on the Ottawa Decisional Support Framework. The Plan, Do, Study, Act model guided project planning and evaluation processes. Health care providers were educated on the cannabis decision aid and its use during clinical encounters. Education pre-test/post-test surveys will assess changes in health care provider cannabis decision aid knowledge. Data collection at one- and three-months post-implementation will measure: 1) health care provider frequency of decision aid use, 2) health care provider satisfaction, and 3) decision aid feasibility and acceptability.

Results: Data collection is still in progress. A knowledge pre-test survey was sent by email in fall 2021 to all licensed health care providers at the clinic. Providers at the clinic include two physicians, three physician assistants, and three advanced registered nurse practitioners. To date, six of eight providers have responded to the pre-test survey for a response rate of 75%. Remaining data collection, and analysis will be completed by January 2022.

Conclusions: This project will inform the partnering health clinic on the utility and practicality of a cannabis decision aid for health care providers. The results may guide clinic practice on patient cannabis use, pain management, and shared decision-making. Further recommendations and implications for practice will be based on final results.

Presence of Pain in First Year of Pediatric Cancer Treatment

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Purpose: The aim of this study was to evaluate reported pain levels by children with cancer and their caregivers during the first year of cancer treatment. Another goal of this investigation was to quantify treatment gaps in symptom management in this population.
Background: Each year in the United States, approximately 15,000 children and adolescents are diagnosed with cancer. Pain and fatigue are the symptoms most commonly reported by this population. The American Nurses Association highlights the ethical responsibility of nurses to address pain and suffering for all patients. This is especially relevant for nurses that work in an oncology setting. While pain in cancer patients has been shown to intensify at the end of life, current research suggests that patients and their families experience a high symptom burden in the first month of treatment.
Methods: A descriptive secondary analysis was performed based on a longitudinal prospective study of creative arts therapy and quality of life in children during the first year of cancer treatment at a quaternary children's hospital in the western United States (n=98, mean age 7.4, range 3-18). Exclusion criteria included previous exposure to at least two creative arts therapy sessions and being non-English speakers due to the limitations of study tools used. Pediatric Quality of Life Inventory (Cancer Module 3.0) and the Faces Scale were administered at baseline and monthly for three months.
Results: Parent-reported pain improved over time (p-value=0.009). As follow-up time increased by 1 month, the parent-reported pain increased by 0.02 (95% CI: 0.0059, 0.0338). Child-reported pain did not have a statistically significant change over time. Additionally, improvement in both parent- and child-reported pain was associated with a happier face (r =0.40, p<0.01) on the Faces Scale.
Conclusion & Implications: Pain during the first year of cancer treatment, specifically during the first month, was significant and should be addressed during nurse-patient interactions. Nurses can hone excellent pain assessment skills and advocate for better pain control. In addition to medication, nurses can promote non-pharmacologic interventions such as creative arts, guided imagery, hot & cold packs, and aromatherapy to decrease pain levels. Future studies should examine the mechanisms related to why pain improved over time. Additional research can focus on broadening the scope to examine pain fluctuations throughout the entire cancer journey.

Growth Curve Analyses of Stressful Life Events: Observations from the SMWHS

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Purpose/Aims: The purpose of this study was to describe the longitudinal trajectory curves of desirable and undesirable stressful life events of women during their years of midlife and to assess whether socio-economic factors, menopausal transition stage, and demographic characteristics were significant predictors of change over time.

Background: Midlife is a time of increased responsibilities for women including multiple roles: taking care of children, caring for elderly parents, managing households, and working outside the home. In addition, most women experience the menopausal transition during midlife. Women's life experiences and reproductive aging influence their perceptions of life events as stressful, whether they are desirable or undesirable.

Methods: Women participating in the Seattle Midlife Women's Health Study (SMWHS), a longitudinal study spanning more than 23 years, who reported desirable or undesirable stressful life events measured at baseline and at years 2, 7, and 10 years were included in these analyses. A modified Norbeck's Life Event Scale was used to elicit data about events women reported and their rating them as desirable or undesirable. Analytic strategies consisted of two types of growth curves: a latent-class growth mixture module to identify longitudinal trajectories of stress over time and a multi-level mixed-effects regression to examine the effects of demographic characteristics (age and menopausal transition stage) and socio-economic factor characteristics (education, gross family income, employment, race/ethnicity, marital status, and parental status) as predictors to augment the results of the growth mixture model. The growth curves were characterized using socio-economic and demographic factors.

Results: Ratings of both desirable and undesirable impact scores decreased over time, until the age of 50-55. The only significant predictor for the Growth Mixture Model of the Undesirable Impact Scores was education: women with more years of education rated the impact of stressful life events lower than did women who had less education. Education, gross family income, employment, race/ethnicity, marital status, being a parent, and menopausal transition stage were not significant predictors for the Mean Impact of Total Life Event Stress or the Desirable Life Event Stress Growth Curves.

Conclusion: As women progress through the menopausal transition, the impact of their life event stress may decrease. These women have had life experiences and/or education that may have given them a different perspective, leading them to rate the impact scores lower as they age. Clinicians and women themselves would benefit from awareness that life events may be less impactful as they age. More research is needed to verify these results including studies of more diverse populations of women.

Coping with Pain Among the Nursing Workforce

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Aims: To describe coping strategies of United States (US) direct-patient care Registered Nurses (RNs) use to address their pain.

Background: Nurses experience high occurrences of pain and injuries at work which can affect their overall health, well-being, and performance at work. This ultimately impacts healthcare systems as nurses' performance at work are tied to patient care. Despite working in a health-oriented profession, not all nurses employ healthy mechanisms to cope with their pain. It is important to understand coping strategies used by nurses, yet few researchers have explored how nurses cope with their pain.

Methods: The study design was a cross-sectional descriptive survey within a larger explanatory mixed methods sequential study on nurses' pain. This report includes the coping strategies participants used, specifically the medications, substances, and modalities direct-patient care RNs use to cope with their pain and the healthcare providers consulted to help them cope with their pain.

Results: Our sample included 2,317 US direct-patient care RNs who were mostly female (96%, n=2,234), aged 30-49 years (55%, n=1,275), and worked in the hospital setting (79.2%, n=1835). Participants in our sample reported a wide variety of approaches to cope with their pain. Most reported use of over the counter (OTC) medications (76%, n=1760). Of those reporting OTC medication use, most used non-steroidal anti-inflammatory drugs (71.8%, n=1663) and/or acetaminophen (40.9%, n=947) to cope with their pain. Few reported using cannabis/ cannabinoids (3.8%, n=89) or alcohol (5.9%, n=137) to cope with their pain. The most reported modalities to cope with pain among participants were non-pharmacological pain management strategies (50.7%, n=1174), such as exercise (31.4%, n=727), and body-based therapies (26.7%, n=618), such as massage and physical therapy. Most participants reported not consulting a healthcare provider to help them cope with their pain (78.6%, n=1,822). However, of the participants who did report seeking care from a healthcare provider, they most frequently reported consulting a general practice provider (10.1%, n=235) and/or orthopedic specialists (2.4%, n=55). Few participants reported consulting a mental health provider to help them cope with their pain (~2%, n=40).

Implications: As healthcare systems look for opportunities to address nurses' health and well-being in the wake of the COVID-19 pandemic, interventions should include strategies to prevent nurses' pain at work, such as adequate staffing and equipment to move patients, and to support nurses who experience pain, including maximizing nurses' access to exercise, body-based therapies, and mental health services. Similar studies should be recreated to ascertain the current types of pain nurses experience considering the COVID-19 pandemic and to uncover facilitators and barriers to positive coping mechanisms for the pain nurses experience.

End-Stage Liver Disease Patient-Caregiver Dyad Perceptions of Symptoms

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Background: The unpredictable nature of end-stage liver disease (ESLD) can mean patients and their informal caregivers encounter psychological, physical, social, and financial burdens. As a patient's illness trajectory changes, ESLD symptoms can become increasingly difficult for patients and caregivers to decipher, complicating perceptions of illness status and appropriate care responses. Studies affirm that with increasing care needs, patients and caregivers experience greater uncertainty. However, we know less about the ways in which patients and caregivers may agree and disagree in their perceptions of symptoms and changes in the patient's ESLD illness trajectory.
Purpose: The purpose of this qualitative dyadic analysis was to examine patients' with ESLD and their informal caregivers' perspectives on their shared experiences of changes in the patient's illness trajectory.
Methods: This analysis draws upon a larger descriptive study that recruited patients with ESLD and their informal caregivers through liver clinics within two healthcare settings. Adult patients (age ≥21) that had a Sodium Model of End-Stage Liver Disease score of ≥15 and informal caregivers (age ≥18) identified by the patient as their primary support were eligible. Participants completed questionnaires over 12 months at 3-month intervals that included the following open-ended question: "Has there been any changes in your experience/situation since we met with you last?" Responses from patient-caregiver dyads that completed questionnaires at ≥2 time points were analyzed individually using qualitative descriptive content analysis, followed by dyadic analysis to identify overlaps and contrasts within patient-caregiver dyad perspectives on changes in their experience over time.
Results: Responses from 112 patient-caregiver dyads were included in the analysis. Patient average age was 57 years old, (range, 23-79 years old) and most lived with their caregiver (79%). The primary etiology of liver disease was alcohol related liver disorder. Caregivers were 58 years old, on average, (range, 25-85 years old) and identified as spouses (n=75), parents (n=13), siblings (n=10), adult children (n=4), friends (n=9), and other (n=1). Preliminary results reveal major themes including: appraisal of patient's condition as improving/worsening/no changes, recognizing symptoms, recognizing changes in mental health/emotional well-being, lifestyle and behavioral concerns, coping strategies, patient-caregiver relationship dynamics, financial challenges, uncertainty, caregiver health issues, and social support. Initial dyadic analysis across time points suggests diverging perspectives on symptoms and appraisal of change in patient's illness status and patient-caregiver relationship, but fewer instances of overlapping themes and perspectives within patient-caregiver dyads. Overlaps and contrasts occurring within patient-caregiver dyads across all themes reflect feeling unprepared for patient's worsening condition, caregiving challenges, patient-caregiver relationship strain, and supportive caregiving relationships.
Implications for Translation to Practice/Further Research: We anticipate the final results will highlight the dyadic approach as a valuable method to enhance assessment of both patient and informal caregiver appraisal of symptoms and needs at multiple points throughout the illness trajectory in a clinical setting. Future research would include dyadic analysis of in-depth interviews with patients and informal caregivers individually to facilitate a deeper examination of perspectives and experiences.

Funding: National Institutes of Health/National Institute of Nursing Research (1 R01 NR016017-01)

Montana Rural Residents' Perceptions, Beliefs and Meaning of Suicide

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Purpose/Aim: The purpose of this study was to discover and understand rural residents' perceptions, beliefs, and meaning of suicide in order to inform and educate providers and policy makers in Montana.

Background: High rates of suicide are a persistent public health challenge in the state of Montana. Consistently among the nation's highest rates, Montana had the highest rate of suicide in the United States from 2014-2016. Shortages of mental health services contribute to these high rates of suicide. Designated a rural frontier, Montana has been labeled the "largest and most severe mental health shortage areas in the United States, spanning approximately 47, 945 square miles". The majority of completed suicides (80%) have not accessed mental health services. Despite these significant public health challenges, very little is known about rural Montana residents' perceptions and beliefs about suicide.

Methods: A small-scale focused ethnography was used to pilot test assessing this understudied topic in rural Montana. Six participants over the age of 18 were purposively recruited through a gatekeeper within a Central Montana rural community. Participants were interviewed using an open ended semi-structured interview guide. All interviews were audio recorded and transcribed verbatim. Following transcription, the data were analyzed using Leininger's Four Phases of Data Analysis. The NVIVO 12 data manager was used to assist in data analysis for categories and patterns.

Results: Two men and four women ranging in age from 26-66 participated in the study. Upon completion of the analysis seven categories and four patterns were identified: pattern of how to talk about suicide and mental illness, pattern of rugged individualism, pattern of gossip, and a pattern of not talking about suicide.

Implications: The research findings have implications for identification of appropriate suicide education interventions, informing future Montana policy, and providing rural providers with a deeper understanding of the unique cultural barriers that might exist in rural Montana communities.

Perceptions of People Experiencing Homelessness and Providers on COVID-19's Impact

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Purpose: Utilizing community-based participatory research (CBPR) methods, we assessed the perceptions of persons experiencing homelessness (PEH, who have recovered from COVID-19, and their health and social service providers (HSPs) on the impact that COVID-19 may have had on altered levels of mental health, substance use and service delivery.

Rationale/Background: PEH reveal a disproportionate burden of health disparities which has been further exacerbated by the COVID-19. Yet, limited data has been available to understand stressors as perceived by PEH and their HSPs during the COVID pandemic. Such COVID-19 stressors may include confinement, isolation, reduction of healthcare and drug treatment services and staffing shortages that limit access to drug treatment programs and ability to attain clean needles.

Methods: Utilizing CBPR principles, a community advisory board was established to refine a semi-structured interview guide which guided remote individual interviews with PEH (n = 21) who recovered from COVID-19 and HSPs (n=10) in Skid Row, Los Angeles. A multi-pronged, qualitative, data analytic approach founded in four principles of trustworthiness (i.e., credibility, transferability, dependability, and confirmability) was utilized to analyze the narrative PEH and HSP raw data.

Results: The mean age of PEH was 48.3 (SD 16.9) and the majority were male (85.7%). Over one third (38.1%) of the sample was equally Hispanic and Black/African American, followed by White/Anglo/Caucasian (28.6%), Native Hawaiian/Pacific Islander (28.6%), and Other (4.8%). Most HSPs were health providers (40%), followed by program directors (30.0%), social workers (20%), and other (10%). The majority of HSPs were White (70%), followed by Asian (20%), and Other (10.0%). The major themes arising from the data included: 1) Impact of COVID-19 on Mental Health; 2) Impact of COVID-19 on Limitation of Harm Reduction Services; and 3) Coping Strategies Utilized During the COVID-19 Pandemic.

Implications for Translation to Practice/Further Research: Valuable insights were garnered from PEH and HSPs related to stressors experienced during the cOVID-19 pandemic. Such information will allow us to tailor prospective intervention programs that would be sensitive to the needs and concerns of PEH in areas of greatest need. An understanding of barriers accessing health care and in securing clean needles are critical to incorporate in culturally sensitive programs, with a focus on improving mental health, reducing substance use and improving delivery of services.

Funding: University of California Irvine CRAFT COVID Research Initiative

Resilience, Motivational Factors, and Medication Adherence Among Rural Older Adults

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Adherence to hypertension medications has been explored in previous studies; however, these studies focused on individuals who reside in urban areas. More information regarding demographic characteristics and relationships to motivational factors among rural older adults with hypertension is needed. The purpose of this study was to explore medication adherence among rural older adults with hypertension and constructs identified in self-determination theory (SDT) including motivation (autonomous versus controlled), perceived competence, perceived autonomy support and basic needs satisfaction. Rural nursing theory (RNT) was used to include the concept of resilience. This cross-sectional study included a sample of 80 older adults (≥ 65 years of age) prescribed at least one medication to control hypertension. Participants ranged in age from 65 to 89 (M=74.04, SD=6.18) from rural communities in the northwest. A demographic questionnaire, a measure of medication adherence and questionnaires to assess perceived autonomy support, basic needs satisfaction, autonomous and controlled motivation, perceived competence, and resilience were used. Correlational analysis and multiple regression were used to examine associations with adherence and to predict adherence. Perceived autonomy support, resilience, cost of medication and medication regimen complexity were the only variables significantly associated with medication adherence and predicted antihypertensive medication adherence. Overall, the measure used to assess medication adherence indicated high levels of adherence.

Rural Provider Attitudes and Practices about Major Depressive Disorder

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Purpose: The purpose of this quality improvement (QI) project is to identify change in healthcare worker attitudes and practices regarding depression screening, diagnosis, and management after the implementation of routine depression screening in primary care.
Background: The physical and economic impact of unmet mental health needs, such as diagnosis and treatment of depression, is profound. Signs and symptoms of depression may be missed if healthcare workers are not looking for them. The United States Preventive Services Task Force (USPSTF) found convincing evidence that screening improves the identification of adult patients with depression in primary care settings and recommends routine screening.*
Design: A pre-post design for this QI project will assess and compare the healthcare workers' attitudes about depression and rates of diagnosis before and after implementation of routine depression screening.
Methods: This project provides an education session about USPSTF recommendations and introduces a depression screening tool, the PHQ-9.* Healthcare workers who choose to participate after the education session will complete an online questionnaire, the Revised Depression Attitudes Questionnaire (R-DAQ), assessing their attitudes about depression.* After completing the R-DAQ, participants will administer the PHQ-9 to every patient 18 years of age and older presenting for routine care. For this IRB-approved project, consent was obtained before completion of electronic questionnaire and collection of data regarding rates of diagnosis.
Assessment: Change in attitudes will be assessed by comparing healthcare worker R-DAQ responses before and after project implementation, approximately 14 weeks apart. Change in practice will be assessed by determining change in rates of depression diagnosis before and after implementation of routine depression screening of eligible patients.
Outcomes: According to research,* increased screening will lead to changes in attitudes and increased rates of depression diagnosis.
Conclusions: Implications for practice will be assessed during the data analysis stage of this project. Support for expansion to other rural private practices is anticipated.
*References available upon request.

Funding: HRSA Advanced Nursing Education Workforce (Award# T94HP30874)

Silver Diamine Fluoride Awareness in Rural and Native Communities

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Purpose: Increasing awareness of SDF as an effective and low-cost treatment option for rural and American Indian communities, using community engaged methods.

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. An alternative dental treatment for cavities shows promise in this area. Silver diamine fluoride (SDF) is an antimicrobial substance that arrests tooth decay and can help re-mineralize the tooth. The only known downside to SDF is the black staining left of the tooth where the product is applied.

Methods: Community education is one component of the solution to raise awareness about pediatric oral health. GoodHealthTV (GHTV) is a subscription-based health promotion network hosted in over 40 American Indian waiting areas in Montana. The advantage of using GHTV is the already widely used infrastructure that is in place. After talking with community members about their questions and concerns, Montana State University College of Nursing planned and created a 180 second video about SDF based on the Precaution Adoption Process Model. The SDF video played across the GHTV Network on a loop with other videos relevant to the community from March 22, 2021 to August 31, 2021.

Results: Waiting room participants (n = 100) were invited to complete a survey after viewing the video. Participants received a $25 token of appreciation for completing the survey. Of the participants, 94% identified as American Indian with an average age of 37. The majority of participants were female (66%) and had at least one child (79%). Only 20% of participants had ever heard of SDF before the video was shown but 88% found the video very useful and more than half (54%) were very like to pursue SDF treatment for their children. Nearly all (96%) thought that their child's oral health would improve with the use of SDF. While 100 people elected to complete the survey, GHTV estimated that the video received 86,106 views over the 127 days of airtime.

Implications: There are two important implications of this work. First 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 that community members were amenable to SDF as a safe, non-traumatic and inexpensive method for arresting caries. Second, the GHTV Network was shown to be an effective method for delivering information about SDF to a predominantly Native American audience living in a dental and healthcare provider shortage area. The rural nurse may use waiting room messaging to assist in providing information outside of the provider-client interaction.

Learning Objective: Participants will articulate the utility of waiting room messaging to the community education responsibilities of the public health nurse.

Funding: Health Resources and Services Administration HRSA 18-014, National Institutes of General Medical Sciences of the National Institutes of Health P20GM103474.

The Effects of Stigma and Mindfulness on Perceived Stress in PLHIV in Myanmar

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Background: HIV is a highly stigmatized and stressful condition for people living with HIV (PLHIV). As a country heavily influenced by religion, especially Buddhism, Myanmar has been the site of few studies exploring the effect of mindfulness on perceived stress and HIV stigma among PLHIV in Myanmar. In this paper, we explore the relationships among perceived stress, stigma, and mindfulness and how the perceived stress from HIV stigma interacts with the mediator of mindfulness.

Methods: From January to July 2020, a sample of 248 eligible PLHIV was recruited by random sampling methods from a private Facebook group that included more than 18,000 people in Myanmar; 90% of the members of the group were PLHIV. Data on demographics, HIV stigma, mindfulness, and perceived stress were collected. The bias-corrected percentile bootstrap method (repeated 5,000 times) was used to test multiple mediation analyses.

Results: After controlling for the effects of demographic variables, the path from perceived HIV stigma to perceived stress (direct effect $\beta=0.16$) and the mediating effect of mindfulness on that stress were significant (indirect effect accounts for 45.15% of total effect).

Conclusions: This exploratory study shows that mindfulness plays an important role in mitigating the relationship between HIV stigma and perceived stress. Interventions enhancing mindfulness-based practice should be considered to reduce HIV stigma and, therefore, lower perceived stress among PLHIV in Myanmar.

Funding: NIH/FIC R21011277; PI: Chen, Wei-Ti

Self-Perceived Interprofessional Learning in the Virtual World

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Background: Formed in 2009, the Interprofessional Education Competencies (IPEC) outlined knowledge, attitudes and skills necessary for best practice of interprofessional (IP), collaborative practice. To meet the demands of healthcare practice, health profession (HP) students are expected to learn about, from, and with each other through interprofessional education (IPE) initiatives in their educational settings.2 Regis University implemented goals to facilitate team-based healthcare approaches and created curricula to meet the goals since 2018. Originally in person, the academic year of 2021 required creativity to perform the educational activity virtually. The purpose of the mixed method study was to evaluate program effectiveness and to explore what students self-assessed in learning following a virtual, campus-wide IPE event as compared to previous in person events.

Methods: The IRB-approved, mixed method study used a convenient, self-selected cohort. Subjects included agreeable HP students who self-assessed their learning from an IPE event using the Interprofessional Collaborative Competencies Attainment Survey (ICCAS) scale as a pre and post event survey. Four hundred and thirty-seven HP students were invited to participate in one of the two IPE event from Schools of Counseling and Family Therapy, Nursing, Pharmacy, and Physical Therapy and students from a collaborative Occupational Therapy program. The themes of the IPE event included medical errors and clinicians implicit/explicit bias. The event employed the use of paper cases to prepare and provider discipline specific care plans while in collaborative IP teams' with group discussion concluding in debrief.

Results: A total of 437 HP students participated in two IPE events, 474 quantitative 288 responses in qualitative, with results revealing a 77% response rate (n=139). Researchers gathered data and feedback from consented students before and after the educational experience to self-assess participant's perception of the IPE event on their learning as a future healthcare provider. Preliminary survey results were overwhelmingly positive towards constructive impact on student's IP skills and behaviors. All scores of the ICCAS increased from the IPE event, and preliminary data suggest that the virtual format did not deter student from learning the knowledge and skills intended by design. Final results will be shared during poster presentation

Conclusions: As many educational institutions evaluate their plan to prepare HP students for a dynamic IP clinical environment, this study found hosting an IPE event virtually, may be a viable format in assisting HP students to build skills and behaviors toward working with HP professionals outside of their discipline. These small group, virtual IPE events may assist HP students in understanding the roles and scope of various healthcare providers to improve efficiencies in future practice. Educators realize a small group IPE event may be an excellent preparation source for HP students future prelicensure clinical practice.

Integration of Telehealth Using Design Thinking in a Teaching and Learning Environment

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Purpose: This research had three aims:

- To implement an innovative pedagogical approach to introduce students to telehealth
- Develop modules and faculty resources for in-class activities on telehealth and pedagogical approaches
- Administer surveys to assess the overall effectiveness of above goals

Background: Telehealth emerged as an integral part of healthcare during COVID-19. An effective care delivery model in the United States since the 1950's, telehealth has proven to be a viable platform that can decrease costs, increase access to care and improve consumer satisfaction. Understanding the immediate need of telehealth proficiency, telehealth education must be integrated into nursing curricula.

Telehealth education is inadequate in preparing nurses for the telehealth practice environment. Nursing schools need to assure that undergraduate baccalaureate students are proficient in telehealth skills (assessment, communication, education, and data management) and principles (benefits of telehealth, telecommunication technology, HIPPA, and legal and ethical issues). However, adding content to an established curriculum can be challenging for nursing education because of the lack of faculty training and expertise, and the challenge of implementing telehealth education across an overpacked curriculum.

Methods:

Pedagogical approach: Design Thinking

The multidisciplinary team identified Design Thinking as a framework for exposure. Design thinking is a non-linear framework of methods that enables exploration of ambiguous and complex problems. Design thinking provides a safe space for creativity and failure at the intersection of technological advancements, human-centered needs, and economic viability.

Module Development

The team created a three-module workshop consisting of an overview of telehealth, design thinking, and a workbook. The workbook challenged students to imagine telehealth-driven solutions within a health-centered scenario. Additionally, two faculty in-services were conducted to review the workshop. This approach supported faculty to facilitate the workshop.

Measuring Effectiveness

Pre-and post-surveys were administered to faculty and students capturing their knowledge, confidence, skills, and abilities about telehealth and design thinking. The post-survey included questions about the effectiveness and future implementation within curricula.

Results: For faculty (*n=9*) and students (*n=138*) alike the survey results demonstrated increased knowledge in telehealth and design thinking; and identified an increased confidence in both areas. Faculty reported the activity was "*innovative*" and helped them to "*think in a new way,*" and a new way for students to "*use their creativity*". Students reported the activity helped them "*think about their nursing practice in a different way*" and better "*understand the patient's point of view*". Overall, students grasped telehealth and a new way to "*solve problems*". Finally, they "*appreciated the team approach*" and experiential learning challenge. Faculty and students mutually reported a desire to see this activity continue.

Implications for Nursing Education: Although there are barriers to implementing telehealth into a packed nursing curriculum, it can be mitigated by establishing regional and local telehealth partners, interdisciplinary academic partnerships, and utilizing a creative problem-solving framework to empower future nurses to critically shape emerging technologies that impact their future practices.

Using Online Survey Software to Collect Visual Data for Qualitative Research

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Purpose/Aim: This project aims to examine the feasibility of collecting narrative and visual data for qualitative research using online survey software. The feasibility study focused on the experiences of frontline nurses during the COVID-19 pandemic.

Description of Method: The COVID-19 pandemic placed nurses in an unprecedented situation, warranting research inquires focused on their stories of caregiving. Researchers aimed to elicit these stories through photographs to allow participants to reflect deeply on their experiences and craft a meaningful narrative, while also providing researchers with sensory artifacts (i.e. photographs), adding a visual perspective to the narratives. However, the pandemic placed increasing demands on nurses' time, posing a barrier to participation in this study. To ensure that the stories of nurses were well represented, researchers used online survey software to gather narrative and visual data from nurses to reduce the burden of their participation.

Internal Consistency of the Method: Study participants used mobile devices or computers to access the online survey. Respondents first answered a series of questions to determine their eligibility. Eligible and willing participants then completed an electronic consent followed by a brief demographic survey. Participants were provided with the opportunity to respond to two photo elicitation prompts followed by a narrative reflection on each photograph. Respondents participated at their convenience and were not constrained by time limits. They were able to access the survey multiple times until completed and submitted.

Logic Linking the Method to Nursing Research Problem: Eleven frontline nurses participated in the survey. Of the those that participated, four nurses answered the photo elicitation prompts and narrative reflections. Online survey software was effective in the eligibility and consent processes. Researchers embedded a series of inclusion and exclusion questions to ensure that participants met all eligibility requirements. Participants were able to review the consent and sign it electronically. Similarly, they were able to quickly and easily complete the survey and respond to questions and prompts. These data were readily accessible to the researchers for analysis via embedded reports within the online survey software.

Conclusions/Utility of Method for Nursing Research: It is feasible to use online survey software to collect qualitative data including the photographic and narrative data collected within this study. The utilization of online survey software allowed frontline nurses to participate in this study at their leisure, revealing insights into their pandemic experiences that might have otherwise gone unrecognized. Despite its utility, online survey software poses some challenges for qualitative researchers. Shorter surveys, that can be completed in a single session are recommended to ensure that participants are able to respond to all prompts. Visual data that is respondent created can include a range of creative media that requires thoughtful planning and consideration in terms of consent, authorship, and confidentiality apart from verbal and written narratives.

Escaping Nursing School: Threading Escape Rooms across the Curriculum

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Background: Escape rooms are immersive, experiential, interactive experiences where students work to solve puzzles and riddles, in order to escape the experience. Previous studies have found that gamification can increase motivation, engagement, and knowledge retention as compared to non-gamified environments. Research regarding escape rooms as a teaching/learning strategy is evolving in the field of nursing. However, most studies report on the use of an escape room for a specific course, rather than being threaded throughout the curriculum.
Objective: The purpose this study was to evaluate student satisfaction, application, and engagement with escape rooms as a teaching strategy. This study is in progress, with data collection complete for Fall 2021 and planned for the entire curriculum in the Fall of 2023 after all students have experienced escape rooms in every semester.
Method: This study is a longitudinal mixed methods study, using quantitative scales and qualitative open ended responses. Data on student satisfaction was collected immediately after the escape room simulation using a Likert scale satisfaction tool. Data on student perception of the impact on clinical knowledge was collected at the end of the semester using a Likert scale tool of specific specialty content. Data on engagement with the curriculum will be collected at the end of the program. A total of 6 different escape rooms were developed across the 6 semester program: 1) Escaping the Sim Lab, 2) Escaping a Diabetic Coma, 3) Escaping a Postpartum Hemorrhage, 4) Escaping a Home Visit, 5) Escaping the Nurse Manager's Office, and 6) Escaping the Nursing Program.
Participants: Participants were nursing students enrolled in a 3 year (6 semesters) Bachelor of Science Nursing program. Participation in the escape room was required as a part of the course however, the evaluation of the experience was voluntary. Fall 2021 semester had a total of 169 participants who completed the escape room experiences (n=28 in 1st, n=31 in 2nd, n=28 in 3rd, n=27 in 4th, n=27 in 5th, and n=28 in 6th) and a total of n=BLANK completed the evaluations, representing a BLANK% response rate (data being collected currently and will be completed by Dec 2021). Results of this study include data on student satisfaction with escape rooms as well as their perceptions of content application on their clinical knowledge. Data on engagement with the curriculum will be collected in the future.
Findings: Overall, students were very satisfied with the escape room experiences. Mean scores for *enjoyed the escape room* (XXX), *found the escape room engaging* (XXX), *desire future participation in escape rooms* (XXX), and *fun way to apply knowledge* (XXX), all showed similar positive results, in the moderately to strongly agree category. Aspects of the escape rooms students found most engaging included the use of video clips, teamwork, communication, solving puzzles, and overall "fun" learning environment.
Conclusion: Using an escape room to challenge students to use and apply clinical knowledge on a given topic is an innovative teaching strategy well received by students and faculty alike.

TECHNOLOGY FOR EDUCATION AND/OR PRACTICE

Virtual Poster and Overcoming Dissemination Challenges during COVID-19

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Purpose: In-person poster presentation at hospital's Nurses' Week was unfavorable due to COVID-related safety precautions. The purpose of this project was to provide a safe and effective scholarly dissemination of nurses' projects while boosting morale and meeting expectations akin to an in-person modality.
Background: Dissemination is an important aspect of the Research, Evidence-Based Practice, and Quality Improvement process to share results. COVID-19 created logistical challenges to delivering a safe, engaging, and fun activity normally held in-person. An alternative modality is needed to continue this initiative. The literature has shown that a virtual poster presentation is an effective alternative widely adopted by professional organizations and academic institutions. However, the virtual presentation format may pose a challenge of drawing in attendees. Another challenge is lack of poster submissions related to staff lacking time to create the posters, understaffing, and other pandemic-induced competing priorities.
Methods: The hospital Nurses' Week planning committee, comprised of Research and Professional Development Committee members along with the Magnet Program Director, developed and implemented a synchronous virtual poster presentation session using the MS Teams platform. This activity started with a call to all nurses to submit a poster highlighting their work. Communication was sent via hospital email, announcements at huddles, and various nursing committee meetings. Furthermore, personal phone calls were conducted to nurses engaged in hospital/unit projects. To reduce nurses' burden in creating the poster, the nursing research committee approved poster templates following scholarly guidelines. These templates were emailed along with a sample poster, and assistance with creating the poster was offered. Poster presenters were required to submit a rapid-fire 2.5-minute "voice over" PowerPoint presentation to allow for an oral delivery imitating an in-person presentation while avoiding critical staffing issues in the patient care areas. All "voice over" posters were assembled into one PowerPoint presentation, then categorized into Research, EBP, QI, Innovation and Education. A meeting link was sent to hospital nurses email distribution list. During the synchronous virtual poster presentation, an RN moderator introduced each category, then the "voice over" posters were played. Having a live moderator allowed for attendee and moderator real-time interactions. The session was recorded and posted on the organization's website.
Outcomes: A total of 27 posters, 102 live event log-ons, and 20 views to recording were noted. With staff sharing an office, the number of people viewing could be higher. This modality allowed for viewing among night shift and satellite staff. Event evaluation via survey and anecdotes revealed positive comments. Many agreed this event had increased awareness of nurses' work implemented across the healthcare system and inspired them to conduct or participate in unit projects. The responses overwhelming theme centered around the "sense of pride" from nursing accomplishments and "breath-of-fresh-air" during difficult times. Most respondents preferred the virtual over the traditional in-person activity. Negative comments include visuals related to small texts.
Conclusions: Creativity is important to continue valuable initiatives. The virtual poster provided an innovative and safe method for dissemination while momentarily lifting nurses' spirits that may have been crushed by the pandemic.

Virtual Clinical Supervision for Prelicensure Nursing Students: A Pilot Study

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Background: Clinical site visits (CSVs) are critical in student assessment during preceptored clinical experiences. However, it can be challenging for nursing faculty to complete CSVs person due to the number of students supervised in rural and distant clinic agencies. Although the Commission on Collegiate Nursing Education endorses use of technology to accomplish CSVs, this is not routinely done and there is limited research on this topic in nursing.

Virtual CSVs (VCSVs) are an innovative use of technology to assess student performance. VCSVs have been successfully incorporated in other health disciplines such as medicine, physical therapy, speech therapy, and other allied health specialties, but have not been extensively studied in nursing and limited to supervision of graduate students.

With the current COVID-19 pandemic, many clinical agencies have requested limitation of non-essential visitors. VCSVs are a way for the faculty member, student, and preceptor to meet and discuss student performance and progression towards entry level nursing practice, while still observing restrictions imposed by the clinical agency.

Purpose: The purpose of this project was to understand the feasibility, effectiveness, and efficiency of using VCSVs to evaluate the students' performance during a precepted clinical practicum.

Methods: The author conducted a mixed-methods pilot study involving a combination of quantitative and qualitative data collection.

Results: Overall, students, preceptors, and faculty reported a positive experience with VCSVs.

Conclusion: VCSVs are feasible, cost-effective, effective and efficient for pre-licensure nursing students.

Social Media Literacy for RN-to-BSN Students in the COVID-19 Infodemic

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Background: We live in an unprecedented era of COVID-19 misinformation, conspiracy theories, and fake news largely attributed to social media, creating an "infodemic" --a time when excessive amounts of information, including mis- and disinformation, are spread (Hall Jamieson & Albarracín, 2020). Misinformation is false or misleading information that is spread widely regardless of intent to deceive (Treen et al., 2020), whereas disinformation is created and spread with the intent to deceive (Wardle, 2020). Recent testimony by Frances Haugen, FaceBook whistleblower, reveals how private social media corporations with consolidated power, coupled with no accountability to remove misinformation, harm our health. Social media algorithms are designed to prioritize profit over safety; teenagers are fed messages that promote eating disorders, and extremist movements like the genocide in Myanmar are propelled (Horwitz, 2021). Though efforts to combat COVID misinformation spread are underway (Ritter et al., 2021), the infodemic continues to accelerate. Lack of corporate accountability shifts the onus to individuals to protect themselves in this polluted information environment.

The AACN Essentials (2021) assert that entry-level nurses should demonstrate "best practice" (p. 46) and "ethical use of social networking applications" (p. 48). However, information literacy instruction is generally limited to peer-reviewed sources (Association of College and Research Libraries (ACRL), 2013). Additionally, experts lack clear consensus on nurse informatics (including information literacy) competencies in nursing education curriculum (Kleib et al., 2021). Traditional information literacy instruction teaches students to perform close, vertical readings of scholarly texts to evaluate relevance, accuracy, currency, and authority. Vertical reading is largely ineffective when evaluating digital source credibility (Wineburg & McGrew, 2017). Nurse educators need clearer guidance on how to prepare nurses to respond in an infodemic.

Purpose: The purpose is to describe an innovative education pilot introducing digital media literacy skills in an Information Literacy course for RN-to-BSN students.

Methods: In fall of 2020, faculty partnered with an academic librarian to supplement traditional information literacy instruction with *lateral reading*, or a set of behaviors used by professional fact-checkers that require readers to leave a source to evaluate its reliability, accuracy, and credibility (Wineberg & McGrew, 2017). Course evaluations indicated that students found their newly acquired digital source evaluation skills useful for evaluating social media content. For fall of 2021, course assignments were improved and aligned more closely with the 2016 ACRL Framework for Information Literacy in Higher Education, a framework that provides core concepts for information literacy education and critical instruction. This framework aims to discourage a checklist approach to teaching skills, like using a database to locate a scholarly article, and towards a deeper understanding of core concepts they can adapt and apply to the rapidly changing information landscape.

Assessments: Data collection to evaluate the effectiveness of digital media literacy assignments piloted in fall 2021 is currently in progress.

Conclusions: Information literate students understand authority is constructed and contextual (ACRL, 2016) and adapt their source evaluation behaviors accordingly. We anticipate that nurse educators can blend traditional source evaluation instruction with lateral reading strategies to prepare students for this infodemic.

Telehealth Basics: What Every Frontline Nurse Needs to Know

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Telehealth has become a vital process for providing access to care to patients, especially since the COIVD-19 pandemic. With the expansion of telehealth use, there is an expectation that nurses and other healthcare professionals should be proficient in using telehealth. As a result, Washington state requires all licensed, registered, or certified health care professionals who provide clinical services through telehealth complete telemedicine training. As the delivery of healthcare changes and the demand for using telehealth increases, nurses and other health care professionals need to be educated on the use and application of telehealth technologies so they can meet the needs of their patients. As such, the opportunities for nurses and other healthcare professionals to contribute via telehealth services will continue to increase. Therefore, it is essential that nurses and other healthcare professionals receive telehealth education so that they can be competent with telehealth technology use.

Purpose: The purpose of this program is to determine if a telehealth education course will increase telehealth etiquette and knowledge for nurses and other health care professionals who participate in this course. The intent of this program is to implement a telehealth education course through a nursing continuing education center in the Pacific Northwest. Participants will receive an overview of telehealth and models of care, benefits and barriers to the different types of modalities, policy and regulations, telemedicine readiness, applications during the visit, and documentation.

Methods: The theoretical framework this program will use is Gagne's Nine Events of Instruction Model. This program will use a quantitative pre-experimental design for this DNP project. This project will use a one-group pre-test post-test design. The participants will be given a self-reported preintervention telehealth survey to assess their telehealth etiquette and knowledge. The participants will receive the intervention of telehealth education and immediately following the intervention, the participants will be given the same self-reported telehealth surveys to assess their telehealth etiquette and knowledge competency. The participants will receive a 3-month posttest which consist of the same surveys to assess their knowledge retention.

Expected Outcomes: Participants will receive telehealth education training as outlined and required by the state of Washington. The expected outcomes of this project are an increase in telehealth etiquette and knowledge and fulfillment of Washington State's telehealth training requirement.

Conclusion: The COVID-19 pandemic has had a profound impact on telehealth with increased usage. As we move forward in time, telehealth will likely continue to increase with usage. Thus, for nurses and other healthcare professionals to address the needs of healthcare today and of the future, it is imperative that they receive telehealth training and education.

Funding: HRSA ANEW Grant Trainee-Related Expenses at Pacific Lutheran University, School of Nursing. Award #T94HP30874

Virtual Vignettes: Telehealth Considerations for Physical Assessment and Treatment

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Background: The use of telehealth in providing healthcare to patients is evolving. Healthcare technologies are expanding, and nurse practitioners are expected to be proficient in using telehealth. The expansion of telehealth provides access to healthcare and education to those living in remote areas and for patients staying home due to the COVID-19 global pandemic. There are gaps in education, standardization, and guidance for conducting physical assessment and implementing treatment interventions through telehealth.

Purpose: The purpose of this program development and evaluation project is to determine if a vignette-based, online telehealth education course will improve participant knowledge and confidence in telehealth use. This project develops and implements a continuing-education telehealth education course for nurse practitioners and nurse practitioner students, structured around virtual vignettes, and offered online through a professional nursing association in the Pacific Northwest. Enrolled participants learn how to conduct patient assisted virtual physical examinations using evidence-based care via telehealth and implement it into their current or future clinical practice.

Method: The design for this project is a pre-experimental design implemented between October 2021 and February 2022. This one-group pretest-posttest design includes a pretest assessment of knowledge and confidence using established telehealth scales, provision of an education intervention, followed by a posttest, and another posttest three months later using the same instruments. A minimum sample size of 90 is projected. Participant responses will be compared to determine if a difference is demonstrated in self-reported knowledge and confidence between pre, post, and post intervention.

Data Analysis: Data collection and completion of preliminary analysis is projected by March 2022. Descriptive statistics will be used to analyze and describe categorical variables, such as participant demographics. For continuous variables, the paired *t*-test will be used to detect and measure differences in the pre- and post-education results related to the two study variables: telehealth etiquette and confidence in providing telehealth. The independent *t*-test will be used to assess difference in the study variables based on student characteristics. A repeated measures analysis of variance (ANOVA) using SPSS statistical software will be used to evaluate the overall differences in the pretest, posttest, posttest results related to confidence in telehealth use and etiquette surrounding telehealth knowledge.

Implications: Telehealth has improved access to care, cost savings, improved outcomes, and increased efficiency. It eases the impact of the nursing and provider shortage because it provides easier access to providers for patients. Nurse practitioners are an increasing presence in providing healthcare using telehealth. It is projected this project will add to the body of knowledge and potential strategies for improving provider competence and confidence for effectively implementing this emerging modality of care delivery.

Funding: Grant Support: Financial support for the conduct of this study was provided by the HRSA ANEW Grant Trainee-Related Expenses at Pacific Lutheran University, School of Nursing. Award #T94HP30874

Using Digital Badges to Engage Baccalaureate Students in Primary Care Nursing

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Purpose/Aims: This project aimed to: 1) use digital badges (DBs) to promote student engagement and awareness of primary care (PC) nursing roles/responsibilities in existing baccalaureate curriculum; and 2) provide community RNs professional development promoting working to the top of their licensure and expertise in PC.

Rational/Background: As the complexity of patients increases and the move towards value-based care payment structures expands, RNs working to the top their licensure within the interprofessional PC team are identified as key to improving and providing cost-effective chronic disease prevention and management and promoting patient engagement.

Embedded within curriculum, DBs incentivize engagement through cognitive, affective, and social psychological dimensions and use of gaming concepts increases motivation. As an electronic record of achievement, DBs, when opened, display learning objectives and competencies attained. DBs are stackable competencies earned while the learner moves towards degree completion.

Undertaking/Methods: We created 13 self-directed modules placed within existing courses with content focused on PC nursing roles/responsibilities. The DBs promoted PC Transformation with content and scenarios directed at RNs being full team partners focused on wellness, patient- and family-centered care, population health, care coordination, and data analytics. They also acted as stand-alone, online content for community RNs as professional development and contact hours. We used one interactive family case study across all content with scenarios highlighting RN-Led roles/responsibilities for each family member. The content was developed to focus on how foundational nursing knowledge can, and is, applied to PC. We measured post-completion satisfaction and application and surveyed faculty for perceptions of value to curriculum as well as had our national consultant align content to baccalaureate essentials.

Findings/Outcomes: After full integration into Baccalaureate programs of study, and public access on our website, the modules were completed 3,305 times and 1,347 learners requested DBs. DBs were also offered free of charge to other colleges/schools of nursing during COVID-19.

85% of learners (20 students, 20 RNs working in rural/medically-underserved/primary care) completing a post-completion evaluation agreed that the DBs added value to their work. Free text examples indicated content 'encouraged them to listen to their client', 'take a holistic view of health and considering social needs'. Data further showed high learner acceptance of using DBs, increased motivation and desire to complete all the badges, as well as their anticipated use in resumes and social media.

Faculty evaluation indicated the content is needed in baccalaureate curriculum and the use of badges is a valuable and engaging technology to use. Consultant evaluation aligned DB content to Baccalaureate Essentials and 4 of the 9 Future of Nursing 2030 recommendations.

Conclusions/Implications for Practice: Awarding DBs is an effective technology to promote awareness of new roles/responsibilities within existing curriculum. Nursing curriculum and professional development is constantly challenged to promote new nursing roles, especially those of the enhanced roles in value-driven healthcare settings. It is imperative that innovative curricula be developed to prepare RNs for these roles/responsibilities and that they are highlighted to future employers.

Funding: This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under UK1HP31735, Nursing Education, Practice, Quality, and Retention –Registered Nurses in Primary Care Program.

TECHNOLOGY FOR EDUCATION AND/OR PRACTICE

Pedagogies to Develop Clinical Competency and Confidence

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Background: Adult Gerontology Acute Care Nurse Practitioners (AGACNP) require advanced knowledge and skills assessing and managing patient's medical diagnosis. The literature theorizes that confidence is correlated with competence. Promoting self-confidence early in clinical training provides a crucial foundation for the successful acquisition and implementation of vital knowledge and skills. The COVID-19 pandemic presented an opportunity to evaluate differences in clinical skill acquisition and clinical teaching pedagogies using virtual patient simulated-based learning and assessment methodologies.
Purpose: The purpose of this analysis was to determine if a specific online pedagogy using guided virtual patient simulation positively affects NP students' confidence level applying clinical reasoning and patient management skills with unguided simulations.
Objectives: The objective of this project was to compare AGACNP students' clinical reasoning and management scores as well as confidence levels between two different teaching methods, a case-based approach versus a traditional didactic pedagogy.
Methods: This project was to compare competence in clinical reasoning and medical management, documenting findings organized by symptoms, objective, assessment, and plan (SOAP), self-reported confidence level in diagnosing and managing a similar case, between two AGANCP clinical courses with differing pedagogical paradigms. A beginning clinical course employed a chief-complaint/symptoms indexed case-based approach using virtual patient simulations emphasizing clinical reasoning and supporting medical decision-making. A second advanced clinical course focused on medical decision-making indexed by organ systems and symptomatology using traditional textbooks and peer-reviewed articles. Fifteen students completed both classes that shared end of module formative evaluations using DxR clinician online virtual patient simulations. Confidence level was self-evaluated using a 4-point Likert scale, ranged from "not confident", "some confidence", "confident," and "very confident."
Results: A pair-wise comparison showed a higher frequency of students' self-evaluation of clinical reasoning as confident or very confident in the case-based approach as compared to the traditional pedagogy (confident, 65% vs. 41%; very confident, 9% vs. 4%; respectively $p_{confident} = 0.0808$; $p_{very\ confident} = 0.0895$). Similarly, a higher frequency of students' self-evaluation of clinical management as confident in the case-based approach than the traditional pedagogy (60% vs. 36%; p=0.0852). A multinomial regression showed that having seen or read a similar case had a significant effect on students' self-evaluated clinical confidence (p = 0.0067, p = 0.0014, respectively) and management confidence (p=0.0008, p = 0.0001, respectively). Self-evaluated clinical reasoning and management confidence significantly affect the SOAP score (p=0.0223, p = 0.0461). The majority of students had higher objective clinical reasoning scores using the case-based approach (n=13, 87%) and higher management scores using the traditional pedagogy focused on management (n= 11, 73%).
Discussion: Both case-based approach and a pedagogy focus on clinical management are needed to develop AGACNP students' clinical reasoning and management skills. The case-based approach may better support the development of AGACNP students clinical reasoning confidence than the traditional content delivery pedagogy. Having seen or read similar cases significantly affect students' self-evaluation of clinical reasoning and management confidence levels, which in turn strengthen students' SOAP scores.

TECHNOLOGY FOR EDUCATION AND/OR PRACTICE

Nurses' Perceptions of Using Artificial Intelligence to Support Clinical Practice

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***Shelia Gephart**, PhD, RN, FAAN, College of Nursing, University of Arizona, Tucson, AZ*

Purpose/Aim: AI use is becoming ubiquitous in healthcare such as in electronic health record (EHR) screening tools, early warning algorithms, or through embedded clinical decision support systems. The aim of this study is to describe nurses' perceptions regarding challenges, barriers, and feelings towards using AI to support clinical practice.

Rationale: AI has the potential to influence nursing roles, workflows, and the nurse-patient relationship. With nursing being the largest proportion of healthcare workers, the influence of AI could be significant. Although in use since the mid-twentieth century, nursing's adoption of AI is in its infancy and lags behind other disciplines. We do not understand this poor adoption because nurses' perceptions towards AI have not been fully described. The Informatics Research Organizing Model which consists of four main constructs, clients, context, technology, and outcomes which are akin to those of nursing's metaparadigm will frame this exploration.

Methods: To describe nurses' perceptions about AI in practice, qualitative description (QD) would be an appropriate naturalistic methodology to describe a truer picture of how nurses feel about AI.

Setting/Sampling: Nurses will be selected from an integrated delivery health system where the use of AI has been implemented across multiple sites. Next, participants will be selected deliberately using criterion sampling of nurses that work with AI in their practice. We will then shift to snowball sampling using participating nurses' referrals until data saturation is achieved

Data Collection: Data collection will involve a series of in-depth semi-structured individual interviews over three months. Data will be collected via audio/video recordings and electronic field notes and will subsequently be transcribed by trained transcribers and the researcher.

Data Analysis: Investigators will continually move back and forth from sampling to data collection to data analysis, to gather richer data and meaningful revelations. A content analysis will be conducted. The coded data will be examined for similarity and to determine appropriate labels for the data points to be clustered into relevant categories. Once categories are determined, they will be organized overarching themes. This process will be repeated multiple times to provide further breadth and depth.

Trustworthiness Criteria: Credibility will be enhanced through prolonged engagement. Study audit trails, investigator reflexivity, and transparency of presuppositions will be addressed by having other researchers validate the data to ensure that they are credible. Since this study has planned triangulation and replication mechanisms of validating the same study within similar healthcare organizations across a health system, we believe that this will help to establish dependability and confirmability of the study.

Anticipated Results: This study will result in a thorough description of nurses' perceptions and feelings towards AI supported practice that may shed a light on why AI adoption is lagging in nursing.

Implications and Future Research: As AI becomes more ubiquitous in healthcare, it is important to describe the perceptions and feelings of nurses towards AI. Describing how nurses feel about AI, is an initial step in beginning to understand why AI adoption may be lagging in nursing.

An Ambulatory Care Nursing Toolkit for Enhancing Prelicensure Nursing Education

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Purposes/Aims: To develop and evaluate an Ambulatory Care Nursing Simulation Toolkit for training pre-licensure nursing students and nurse residents in clinical reasoning and key competencies specific to the ambulatory care (AC) setting.
Rationale/Conceptual Basis/Background: Registered nurses working at the top of their scope of practice are critical to meet the nation's health care needs in AC settings. Prelicensure programs give inadequate training in AC-related nursing skills. To address this challenge, we developed an AC Nursing Toolkit comprising seven standardized clinical simulations and three online learning modules that can be used for prelicensure training and professional development for practicing nurses.
Methods: The simulation toolkit includes full instructional materials for: 1) annual wellness visits (AWV), 2) electronic health record (EHR) inbox management, 3) telephone triage, 4) chronic illness self-management, 5) psychological first aid (PFA), 6) chest pain, and 7) AC interprofessional teams. Stand-alone learning modules are also integrated into the simulation preparation, including: 1) EHR in ambulatory care, 2) telehealth basics, 3) PFA. We implemented simulations 1-5 and modules 1-3 with traditional BSN students in the 2020-2021 academic year. All simulations and modules will be permanently integrated into the nursing curriculum in 2021-2022. Student learning for the simulations is assessed using learners' self-rated learning objective attainment and the 20-item Simulation Effectiveness Tool-Modified (SET-M), and perceptions of improved self-efficiency and performance using the SPNS Program Cooperative Agreement Evaluation instrument for the learning modules. Data collection occurred in the 2020-2021 academic year (AY) and will continue in AY 2021-2022.
Results: In autumn 2020, 79 students completed simulations 1-5; 41-58% completed the evaluations. Over 90% of the students responded "Strongly Agree" or "Somewhat Agree" on their ability to meet the five learning objectives for each simulation: AWV = 97-100% (n=35-36 of 36 respondents), EHR inbox = 91-97% (n=32-34 of 35), telephone triage = 95-100% (n=42-44 of 44), self-management = 100% (n=46), and PFA = 100% (n=32). "Strongly Agree" was endorsed by ≥75% of students on all except three learning objectives: Understanding top-of-scope RN practice in the AWV simulation (68%, n=24 of 36 respondents), engage the healthcare team in the EHR Inbox simulation (57%, n= 20 of 35) and document care in the Telephone Triage simulations (70%, n=31 of 44). On the SET-M, mean subscale scores indicated that most students responded "Strongly Agree" to the items. Mean subscale scores (scale range = 0-2) across the five simulations were: Prebriefing, 1.7±0.5 to 1.9±0.3; Debriefing, 1.9±0.3 to 2.0±0.1; Learning, 1.4±0.6 to 1.9±0.3; and Confidence, 1.7±0.5 to 1.9±0.3. Collection of evaluation data is continuing in autumn 2021.
Implications for Translation to Practice/Further Research/Policy: In addition to local enhancement of an AC nursing curriculum, these expert-designed and evaluated materials will be openly available online to support national efforts in AC nursing training to enhance the healthcare workforce. Such flexible educational materials have great utility to support AC nursing learning in multiple ways and across a variety of settings.

Funding: Health Resources and Services Administration (HRSA) awards: Nurse Education Practice Quality Retention¬ Registered Nurse in Primary Care, UK1HP31711; Nurse Education Practice Quality Retention¬ Registered Nurse in Primary Care COVID, 1 T1PHP39122

TECHNOLOGY FOR EDUCATION AND/OR PRACTICE

Clinical Inquiry Using Data Extracted from the Electronic Health Record

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Background: Massive amounts of clinical data are stored in electronic health records (EHR). Analyses of these data can inform clinical practice, yet barriers prohibit clinicians from systematically accessing clinically meaningful data sets. In one health system, nurses led an interdisciplinary team to extract EHR data to answer clinical questions to inform and improve nursing practice.

Methods: A team consisting of nurse scientists, nurse faculty members, biostatisticians, data scientists, and a nurse leader met on a regular basis to create a process for extracting EHR data to answer clinically relevant, nursing-centered questions. The team used an important nursing question to model data to create a repository of demographic, administrative and clinical data from two hospitals in the Pacific Northwest from 2014 - 2020.

The interdisciplinary team selected for study the management of acute pain during hospitalization for cellulitis. In the hospital setting, nurses are at the point of care for pain management, and often make judgements for how often/how much pain medication to administer based on "as needed" order sets. Care guidelines have increasingly directed reductions in opioid analgesic medications. Accordingly, the team sought to determine changes over time in the proportion of patients administered high-dose opioid medications during hospitalization for cellulitis.

Results: Fully anonymized data were extracted from the EHR (n=3,414 encounters) and housed in REDCap project database. Descriptive statistics were used to characterize the sample and calculate the proportion of patients receiving analgesics between 2014-2020. Regression models tested relationships between independent risk factors and the outcome of receiving a high-dose opioid medication during at hospitalization for cellulitis. Findings aligned with best practice guidelines and suggested that for adults with cellulitis treated at two hospitals, the proportion receiving a high-dose opioid analgesic have decreased over time. Additionally, higher average recorded pain score during hospitalization, presence of an opioid prescription within 30 days of hospital encounter, longer length of stay, and younger patient age, independently increased the odds of high-dose opioid administration.

Implications for Practice: The large volume of data housed in the EHR, paired with the lack of systematic process for sharing EHR data with clinicians delivering care, support the need for a surveillance technique to extract, synthesize, and share data with healthcare providers to drive quality improvement practices. Successful data extraction and analysis performed by the interdisciplinary team provide evidence that data scientists and clinicians, especially nurses who work closely with patients and document many components of care including medication administration, can partner to utilize the EHR to inform practice. Resources should be dedicated to forming and sustaining nursing led EHR extraction teams.

RESEARCH & INFORMATION EXCHANGE POSTERS

The Research & Information Exchange (R&IE) includes posters of research conducted by faculty, students, and nurses in clinical practice. These posters have been submitted by member organizations of WIN and have not been peer-reviewed by WIN.

ARIZONA STATE UNIVERSITY EDSON COLLEGE OF NURSING AND HEALTH INNOVATION

FACTORS ASSOCIATED WITH INFANT SLEEP DURING THE COVID 19 PANDEMIC
Nana Jiao, Megan E. Petrov

AN INTEGRATIVE REVIEW OF PSYCHOPHYSIOLOGICAL INTERVENTIONS EFFECTS IN OLDER ADRD CAREGIVERS
Kebafe Segosebe, Julie Fleury, Pauline Komnenich

BRIGHAM YOUNG UNIVERSITY COLLEGE OF NURSING

NURSING CARE OF OLDER ADULTS WITH VISION IMPAIRMENT: RECOMMENDATIONS FOR LONG TERM CARE
Morgan Howard, Corinna Trujillo Tanner, Marinn Smith, Jadison Christenson, Antonia Cash, Jessica Allen

HEARING IMPAIRMENT IN LONG TERM CARE: RECOMMENDATIONS FOR BEDSIDE NURSING CARE
Jadison Christenson, Corinna Trujillo Tanner, Marinn Smith, Morgan Howard, Antonia Cash, Jessica Allen

UTILIZING SOCIAL MEDIA TO RECRUIT RESEARCH PARTICIPANTS: ACCESSIBILITY AND BARRIERS
Marie Prothero, Bobbi Wilson, Madyson Koford, Katherine Huefner, Madeline Sorhu

CALIFORNIA STATE UNIVERSITY, FULLERTON SOUTHERN CALIFORNIA CSU DNP CONSORTIUM

PERIOPERATIVE GLYCEMIC MANAGEMENT AND PROTOCOL
Chelsea Putman, Tyler Stitt, Edward Waters, Rachel McClanahan

OPERATING ROOM TO INTENSIVE CARE UNIT HANDOFF FOR CARDIAC SURGERY
Vincent Risler, Karanbir Sumra, Graham Valley, Sass Elisha, Hannah Fraley

SUGAMMADEX AND HORMONAL CONTRACEPTIVES: IMPROVING EDUCATION AND DOCUMENTATION
Sydnie Dong, Christa Solis, Victor Tung, Sarah Giron, Sadeeka Al-Majid

PATIENT DELAYS IN INTERVENTIONAL RADIOLOGY
Christina L. Arredondo, Hannah Fraley

IMPROVING SEXUAL ASSAULT VICTIM CARE: DEVELOPING GUIDELINES
Elsa Gomez, Elizabeth Winokur, Christina Recinos

PROCALCITONIN: PRACTICING ANTIBIOTIC STEWARDSHIP IN PEDIATRIC CRITICAL CARE
Diana Lerner, Margaret Brady, Ahlam Jadalla

IMPACT OF MULTIMODAL INTERVENTION ON HPV VACCINATION IN AN AMBULATORY OBGYN DEPARTMENT
Olubukola Obidi, Hannah Fraley, Angela Sojobi

CHAMINADE UNIVERSITY OF HONOLULU SCHOOL OF NURSING AND HEALTH PROFESSIONS

HONORING NATIVE HAWAIIAN VALUES:
STUDENT SUCCESS STRATEGIES DURING A PANDEMIC
Rhoberta Haley, Erica Murray, Lorin Ramocki, Pamela Smith

INITIATING A PARISH HEALTH PROGRAM
Pamela Smith, Kathleen Burger, Rhoberta Haley

INTEGRATION OF NATIVE HAWAIIAN AND MARIANIST VALUES IN THE SUCCESS OF NURSING STUDENTS
Nainoa Gaspar-Takahashi, Edna Magpantay-Monroe

PERCEPTION AND ADAPTABILITY OF COLLEGE STUDENTS REGARDING MENTAL ILLNESS
Edna Magpantay-Monroe, Kaelyn Espinda

CHARLES R. DREW UNIVERSITY MERVYN M. DYMALLY SCHOOL OF NURSING

ADHERENCE TO ANTIHYPERTENSIVE MEDICATIONS AMONG AFRICAN AMERICANS ADULTS
Obah Obiageli, Magda Shaheen

EARLY INTERVENTIONS FOR HOMELESS NURSING STUDENTS
Trish Williams-Forde, Magda Shaheen

ADDRESSING LANGUAGE-BARRIERS IN THE HISPANIC COMMUNITY
Ana Cortez, Magda Shaheen, Daisy Duran, Vanessa Gonzales,
Christian Jimenez, Janna Vaystub, Harman Wahid

DIET, ENVIRONMENTAL, GENETIC AND INCOME FACTORS CONTRIBUTING TO MELANOMA INCIDENCE
Katherine Robles, Magda Shaheen

SCREEN TIME AND DEVELOPMENTAL DELAY IN CHILDREN
Emily Sy, Magda Shaheen, Rita Anyanwu, Camille Rebueno,
Kenyawn Simmons, Meliza Suarez

MINDFULNESS-BASED INTERVENTIONS FOR TREATMENT FOR DEPRESSION SYMPTOMS IN ADULTS
Sima Aman, Magda Shaheen, Alexandra Bailey,
Jan Burch, Maria Marin, Wendy Ramos

ROLE OF PROBIOTICS IN IMPROVEMENT OF NON-ALCOHOLIC FATTY LIVER DISEASE
Rosalba Beltran, Magda Shaheen, Ma Suzanne Morales,
Amber Nunes, Yi Chin Padilla, Olga Tyler, Toni Wilson

AIR PRESSURE MATTRESS AND PRESSURE ULCER AMONG HOSPICE PATIENTS
Rabab Fatima, Magda Shaheen, Stephen Eshun, Prabhjot Grewal,
Omobola Fashola, Kathryn Erhahon-otuma

PARKINSON'S DISEASE AND CANNABIS: A SYSTEMATIC REVIEW
Jethro Apostol, Magda Shaheen, Anahit Hakobyan,
Aundshela Go, Janice Kim, Bryan Orden

TRANSITIONAL CARE INTERVENTIONS IN REDUCING 30-DAY HOSPITAL READMISSION FOR CHF
John Melvin Valenzuela, Magda Shaheen, Lorena Bantug,
John De Vera, Jerry Gallaron, Monica Araneta

TELEMEDICINE IN REDUCING INCIDENCES OF ANXIETY/DEPRESSION DURING COVID-19 PANDEMIC
Anna Katrina Cruz, Magda Shaheen, Jennifer Kim, Paul Nguyen,
Kosi Obialor, Janelle Vaughan, LaShon Williams

THE EFFECTS OF TURMERIC ON THE METABOLIC PARAMETERS OF PATIENTS WITH TYPE 2 DIABETES
Anna Erika Aure, Magda Shaheen, Justine Marie Braga,
Ana Benitinez Ceballos, Lorraine Gay Liwag

CHILDREN'S HOSPITAL COLORADO

IMPACT OF REMOTE ACTH MONITORING ON PARENTAL STRESS, COSTS, AND SATISFACTION WITH CARE
Jennifer D. Coffman, Teri L. Hernandez, Kelly G. Knupp

ICE, ICE, BABY! ICING MUCOSITIS:
A NURSE-LED EVIDENCE BASED PRACTICE INITIATIVE
Leanne Adamson, Laura Hurwitz

PEDIATRIC BLOOD CULTURES: INCREASING COMPLIANCE TO REDUCE CONTAMINATES
Scott Frieling, Figaro Loresto

EPIDEMIOLOGY OF VACCINE HESITANCY IN CHILDREN'S HOSPITAL COLORADO AMBULATORY SETTING

Rachel Chantala, Casey Wilson, Leah Elsmore, Taylor Schwab,
Leigh Milhorn, Rebecca Newman, Scott Harpin

UNMASKING PEDIATRIC HYPERTENSION:
A QUALITY INITIATIVE TO IMPROVE BP MANAGEMENT
Krista M. Ray, Maureen Lenssen, Cassie Fishbein

HOAG MEMORIAL HOSPITAL PRESBYTERIAN

PERINATAL NURSE NAVIGATION SUPPORTS BIRTH EQUITY
Jaimie Shane, Wendy Newman

IMPLEMENTING VIRTUAL REALITY BREAKS:
CHALLENGES AND OPPORTUNITIES
Ahlam Jadalla, Rick Martin, Robert Louis, Lori Zaccari, Erin Boxley, Lisa Kaminski

VIRTUAL REALITY TO COMBAT STRESS AND ANXIETY
OF ISOLATED HOSPITALIZED PATIENTS
Crystal Watson, Cecy O'Berg

PERIPHERAL IV INSERTION: TRADITIONAL ARM MODEL
VERSUS A SIMULATED WEARABLE MODEL
Crystal Watson, Kimberly Mullen, Ahlam Jadalla

IDAHO STATE UNIVERSITY SCHOOL OF NURSING

HISPANIC CULTURAL SENSITIVITY FOR HOSPICE CLINICIANS
Diana Gilmore, Melody A.Weaver

ACTION THEATRE FOR COMMUNITY STROKE EDUCATION
Kasey L. Ward, Melody A. Weaver

INTERMOUNTAIN HEALTHCARE

ADDRESSING BURNOUT IN INTERMOUNTAIN HOMECARE NURSES
Heather Clark

CHALLENGING TRADITION: SINGLE CHECKING INSULIN
Julie Gee, Maryanne T. Palmer

RECOGNITION OF DETERIORATION USING PEDIATRIC
RESPONSE ALGORITHMS
Mary Burch

ENHANCING EVIDENCE-BASED PRACTICE CULTURE
THROUGH FACULTY-CLINICIAN PARTNERSHIPS
Ann Reed, Clare Kranz

PRIORITIZING TIME: SIMPLIFYING DOCUMENTATION

IN PEDIATRIC CRITICAL CARE
Marisa Hassemer, Joanna Ostler

SLEEP IS VITAL: NIGHTTIME VITAL SIGN FREQUENCY AFFECTS SLEEP IN PEDIATRIC PATIENTS
Bri Peterson, July Mathias

DECREASED VENOUS THROMBOEMBOLISM (VTE) IN CHILDREN AT PRIMARY CHILDREN'S HOSPITAL
Karmella Koopmeiners, Christopher Miller, Carly Heyrend, Chelsea Peters, Westi Douglas, Lindsay Troy, Crystal Starks, Melissa Sweat, Ryan Arnold

INTERACTIVE EVIDENCE-BASED PRACTICE COURSE PROMOTES PROFESSIONAL NURSING CULTURE
Jody Osteyee

TRANSFORMATIONAL LEARNING IMPROVES NURSING CONFIDENCE ON A PEDIATRIC UNIT
Nick Batty

JOURNEY BOARD EDUCATION TOOLS DECREASE READMISSION RATES IN PEDIATRICS
Clare Kranz, Leanne Richardson, Karmella Koopmeiners

OPENING A HOSPITAL TO A CULTURE OF GREATNESS
Megan Johnson, Francis Gibson, Cameron Symonds

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CROSS-TRAINING NON-ICU NURSES TO THE ICU: A JOURNEY TO COMPETENCE
Sherry Lee, Ellen D'Errico

TRANSITIONING TO A NEW HOSPITAL: *CLEAR THE CLUTTER* TO READY, SET, GO!
Jorje Mesa, Ellen D'Errico

IMPROVING COMMUNICATION: INSTITUTION OF TEAM *HUDDLES* IN AN OUTPATIENT ONCOLOGY CLINIC
Alma Mondragon, Ellen D'Errico

REDUCING DISPARITY WITH FOOD INSECURITY SCREENING IN HOSPITALIZED STROKE PATIENTS
Desiree Torsney, Janet Donnelly, Patti Radovich, Salem Dehom

WHEN THE WORK ENVIRONMENT IS FAILING: CCRN'S PERCEPTIONS PRE-COVID
Vina Ocampo, Jacqueline Jones, Iris Mamier

PASSPORT TO YOUR STROKE JOURNEY: A PATIENT EDUCATION QUALITY IMPROVEMENT PROJECT

Melinda Steinhoefel, Janet Donnelly

WORKPLACE SAFETY AMONG BLACK NURSES:
A HEALTHY NURSE/HEALTHY NATION SURVEY REPORT
Nia Martin, Elizabeth Johnston Taylor, Salem Dehom

ASSOCIATION BETWEEN ALCOHOL AND TOBACCO USE
IN LAO PDR: FINDINGS FROM A NATIONAL SAMPLE
Robert Semakula, Pramil Singh, Anne Berit Petersen

CELESTIAL DISCHARGE
Laura Miceli, Cherie Pefanco

VIDEO-LED BEHAVIORAL GOAL SETTING FOR PEDIATRIC PATIENTS
WITH DIABETES MELLITUS TYPE 2
Tiffany De Jesus, Gloria Huerta, Salem Dehom

ADVERSE CHILDHOOD EXPERIENCES SCREENING
AND TRAUMA-INFORMED CARE IN PEDIATRICS
Odeli Burgueño, Gloria Huerta, Fayette Truax, Salem Dehom, Mariam Fahim

PRACTICE FADE: A CONCEPT EXPLORATION
Kimberly Anderson, Cherie Pefanco

LUCILE PACKARD CHILDREN'S HOSPITAL STANFORD

MONITORING VITAL SIGN CHANGES DURING PEDIATRIC SEIZURE ACTIVITY
USING THE APPLE WATCH
May Casazza, Amelia Sperber, Angela Harber, Ayush Jaggi, Annette S. Nasr

MAYO CLINIC ARIZONA

I CAN SEE: USE OF ELECTROMAGNETIC TECHNOLOGY
FOR FEEDING TUBE INSERTIONS
Jane Sederstrom, Nichole Corbel, Patricia Bowler, Kassi Hyde,
Shae Saint-Amour, Brigid Kiley, Aaron Skolnik

ASSOCIATIONS BETWEEN NAUSEA AND CHANGES
IN GUT MICROBIOME POST-CHEMOTHERAPY
Komal Singh, Cindy Tofthagen, Brenda Ernst, Nicholas Chia

EVALUATING ADHERENCE-PROMOTING TECHNOLOGY
FOR THE TRANSPLANT RECIPIENT
Cassie Isme, Stacy Al-Saleh, Candace Mansour,
Betsy Howe, Karen Dobbins, Lisa Trost

BARRIERS TO PRONING NON-INTUBATED COVID PATIENTS
ON A MEDICAL-SURGICAL UNIT
Emily Tobin, Kelly Cappellini, Jamie Petti,
Jillian Amoroso, Charissa Mascardo

RAISING THE BAR OF THE RAPID RESPONSE NURSE (RRN) DURING THE PANDEMIC

Brigid Kiley, Jane Sederstrom, Natalie Martinez, Matt DeMarco

MONTANA STATE UNIVERSITY
MARK AND ROBYN JONES COLLEGE OF NURSING

HEALING THROUGH EDUCATION, ART, AND RESILIENCY TEACHING (HEART)

Julie Alexander-Ruff

METHODOLOGICAL CONSIDERATIONS FOR ASSESSING ALTITUDE IN RELATION TO SUICIDE

Anne Brown, Tracy Hellem, Alison Colbert

HEALTHCARE PROFESSIONS EMPATHY TRAINING: A CALL TO ACTION

Tracy Hellem, Melanie Wright, Krista Salazar, Mary Nies,
Jennifer Adams, Renee Robinson, Travis Hedwig

INCIDENCE OF ADVERSE CHILDHOOD EXPERIENCES IN NORTH CENTRAL MT'S COMMUNITY VETERANS

Cassandra Maughan, Angela Jukkala, Stacy Stellflug

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SCHOOL OF NURSING

IMPROVING TRANSITIONS OF CARE WITH I-PASS: A QUALITY IMPROVEMENT PROJECT

Michelle Skinner

EVALUATING SMOKE EVACUATION DEVICE USE AT DOERNBECHER CHILDREN'S HOSPITAL

Kawen Zhang

QUALITY IMPROVEMENT PROJECT FOR IMPROVING MENTORSHIP OF ADVANCED PRACTICE REGISTERED NURSES

Kristen Ash

IMPLEMENTING HEAD INJURY ASSESSMENT PROTOCOL IN MENTAL HEALTH: A QI PROJECT

Helen Liu

INCIVILITY IN NURSING EDUCATION: A META-SYNTHESIS LITERATURE REVIEW

Christopher Kahle

SUPPORTING RESOURCE FAMILIES THROUGH KNOWLEDGE TRANSLATION

Vanessa Rutherford

PEDIATRIC ONCOLOGY FAMILY EDUCATION:
A QUALITY IMPROVEMENT (QI) PROJECT
Irma Soto

PACIFIC LUTHERAN UNIVERSITY SCHOOL OF NURSING

POSTPARTUM URINARY INCONTINENCE SCREENING,
EDUCATION, AND SELF-EFFICACY
Megan N. Hamilton, Robert Massey

PAWSCRIBING PROJECT: ASSISTANCE ANIMAL TRAINING
FOR HEALTHCARE PROVIDERS
Alicia Valentino, Rebecca Allen, Jennifer Thomas, Debra Seguin

PROVIDENCE ST. JOSEPH HEALTH

NURSES' EXPERIENCES USING ONLINE RESOURCES
FOR PATIENT AND FAMILY EDUCATION
Carrie Grinstead, Sarah Sumner, Martha Inofuentes-Likins

LET'S GET TOGETHER! ED "TEAM DISCHARGE"
IMPROVING LOS & PATIENT EXPERIENCE
Julie Lisbin

NURSES NOT ON THE FRONT LINE OF THE COVID-19 PANDEMIC
Trisha Saul, Sherri Mendelson, Sheli Hicks, Geri Harmon

IMPROVING PERIPHERALLY INSERTED CENTRAL
CATHETER DRESSING ADHERENCE
Ricardo Guinto

FROM IMAGING TO TREATMENT:
COLLABORATION OPTIMIZES THORACIC ONCOLOGY CARE
Lauri Ledbeter, Kim Ward, Jana Jensen,
Jiten Patel, Alexi Matousek, Rebekah Hart

DECREASING HOSPITAL ACQUIRED PRESSURE INJURIES
THROUGH MICROCLIMATE REDUCTION
Robyn (Yoon) Song, Breanne Ruiz, Andrea Gutierrez,
Veronica Hinojosa, Sakura Norling

SAINT MARTIN'S UNIVERSITY

BRIDGING THE KNOWLEDGE GAP BETWEEN LGBTQ+ AND CANCER
Taryn Zard

PILOTING POI: A GRIEF INTERVENTION FOR MEN

FOLLOWING PERINATAL LOSS
Shandeigh N. Berry, Lori Sirs, Sanyt Shores, Cristina Topia

IMPROVING MISCARRIAGE CARE IN THE EMERGENCY DEPARTMENT
Stephanie Carlo-Roman

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ADDING PATIENT & PROVIDER BURNOUT TO SWISS CHEESE FAILURE ANALYSES
Adrienne Martinez-Hollingsworth, Lisa Barkley, Larry Chu

WELLBEING DISPARITIES AMONG WOMEN OF COLOR PROVIDERS IN THE SAFETY NET
Adrienne Martinez-Hollingsworth, Lisa Barkley

NURSING STUDENT HEALTH EDUCATORS IN CHILDHOOD EDUCATION
DeAnne Larsen, Michele Santilhano

AFRICAN ARTS AND PROVIDER WELLBEING PILOT STUDY
Uzo Nwankpa

THE IMPACT OF WELLNESS PROGRAMS ON HEALTHCARE WORKERS
Nadia Valdovinos, Rafael Piazza, Audrey Reed

HEALTH BEHAVIOR OF CHRONICALLY UNHOUSED: ROLE OF NURSES
Elizabeth Sibson-Tuan

DELIVERY FOR CHRONICALLY UNHOUSED: PRESCRIPTION PROGRAM
Elizabeth Sibson-Tuan, Adrienne Martinez-Hollingsworth, Catherine Tanner

HONORING INDIGENOUS WISDOM IN NURSING CURRICULUM DESIGN
Mark Beck, Richard MacIntyre

NURSING INTERVENTION TO REDUCE HEART FAILURE READMISSIONS
Nadine Pruitt

GRIEF, POST TRAUMATIC STRESS, AND DEPRESSION IN PREGNANCY AFTER PRIOR PREGNANCY LOSS
Paulina Van, Kathryn Lee

ADMINISTRATIVE STAFF ROLES IN A SHARED GOVERNANCE MODEL
Laura Nugent, Adrienne Martinez-Hollingsworth, Lorna Kendrick

USING STRESS FIRST AID TO SUPPORT RESILIENCE AND TRAUMA RECOVERY AMONG NURSES
Adrienne Martinez-Hollingsworth, Lorna Kendrick

UC DAVIS HEALTH

PROMOTING PSYCHOLOGICAL HEALTH THROUGH MULTIDISCIPLINARY PEER SUPPORT
Trudee Murray, Ian Fong, Minna Wieck, Alyssa MacMurphey, Jenni Prevatt

LEVERAGING ACADEMIC MEDICAL CENTER PHD-PREPARED RNS: DEVELOPING A RESEARCH STRATEGY
Lori K. Madden, Sarina A. Fazio

DEVELOPMENT AND EVALUATION OF A MULTIDISCIPLINARY INPATIENT GLYCEMIC TEAM
Berit Bagley, Charity Tan, Deborah Plante

DECREASING THIRST IN NPO ICU PATIENTS
Stacey Camposagrado

PREVENTION OF VENTILATOR ASSOCIATED PNEUMONIA IN THE EMERGENCY DEPARTMENT
Yvonne Hansen, Marni Farr

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IMPLEMENTING FRAILTY SCREENING IN PATIENTS NEWLY DIAGNOSED WITH HEAD AND NECK CANCERS
Aleen Atikian, Stephanie Lazaro, Andrew Erman,
Vijaya Surumpudhi, Eden Brauer

CONCORDANCE IN CHILD PARENTING REPORTING OF SOCIAL VICTIMIZATION EXPERIENCES
Judy Tang, Kristen Choi

GEOSPATIAL ANALYSIS OF PSYCHIATRIC HOSPITAL ADMISSIONS OF THE HOMELESS BY AREAS OF NEED
Joseph H. Grotts, Kristen Choi

PERCEIVED SOCIAL ISOLATION IN HEAD AND NECK CANCER SURVIVORS
Bryan Jun Pin Koh, Eden Brauer

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NEW HOLISTIC THEORETICAL FRAMEWORK TO INFORM INTERVENTIONS FOR CHRONIC PAIN PATIENTS
Zhanette Coffee, Judith Gordon, Terry Badger

DYSPHAGIA AND RISKS FOR MALNUTRITION IN PATIENTS WITH HEART FAILURE
Juvel-lou P. Velasco, Shenghao Xia, Shu Fen Wung

THE INTERPERSONAL RELATIONS FRAMEWORK IN HEALTHCARE
Jinlan Wang, Patricia Daly

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MODEL OF CARE AS PREDICTOR OF TRUST IN TELEHEALTH
Mia Roberts, Paul Cook, Claudia Amura, Amy Barton

REDUCING HOSPITAL-ACQUIRED PRESSURE INJURIES DURING THE COVID-19 PANDEMIC
Kelly Wild, Marybeth Makic

SUMMER CAMP IN THE TIME OF COVID-19:
A PROGRAM EVALUATION OF YMCA CAMP COSBY
Julie Head

IMPROVING TREATMENT OF SEVERE HYPERTRIGLYCERIDEMIA IN VETERANS
Caroline Wool, Kathy Shaw

ALLERGY & IMMUNOLOGY CONTINUING EDUCATION FOR ADVANCED PRACTICE PROVIDERS
Ann Hefel, Maureen Bauer

PREDICTORS OF MEDICATION ADHERENCE AMONG OMANI ADULTS WITH TYPE 2 DIABETES
Nasser Al Salmi, Paul Cook

DISPARITIES IN HIV/AIDS CARE OUTCOMES AND STRATEGIES FOR IMPROVEMENT
Mikale Ogbaselassie, Paul Cook

IMPROVING SCREENING FOR INTIMATE PARTNER VIOLENCE:
A QUALITY IMPROVEMENT INITIATIVE
Sara Mitenbuler, Kristine Gauthier

SCHOOL NURSE MORAL DISTRESS AND DILEMMAS:
YEAR TWO OF THE COVID-19 PANDEMIC
Christina Baker, Scott Harpin

SEXUAL HEALTH EDUCATION OUTCOMES FOR LGBTQ YOUTH LIVING IN A SOCIALLY CONSERVATIVE U.S. STATE
Laura Callan, Kaitlin Schimitz, Scott Harpin,
Brandy Randall, Molly Secor Turner

PAIN IN CHILDREN WITH CANCER: A SECONDARY ANALYSIS OF SYMPTOMS DURING THE FIRST YEAR OF TREATMENT
Rochelle Pickering, Jennifer Raybin, Catherine Jankowski,
Wenru Zhou, Pan Zhaoxing

ELIMINATING PAGERS: IMPROVING CARE TEAM COMMUNICATION
Emily Reyes, Jose Guerrero Baez

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SCHOOL OF NURSING

BABYWEARING: A SCOPING REVIEW
Joo-Hee Han, Hyunhwa Lee

TECHNOLOGICAL COMPLEXITY IN SIMULATION AND LEARNING OUTCOMES IN NURSING STUDENTS
Deborah Rojas, Reimund Serafica, Catherine Dingley, Karyn Holt, Jessica Doolen, Joseph Morgan

PREDICTORS OF HEALTHCARE TECHNOLOGY READINESS IN PRE-LICENSURE NURSING STUDENTS
Emily Boyce, Karyn Holt, Catherine Dingley, Du Feng

PRELICENSURE NURSING STUDENT COMPASSION: A SCOPING LITERATURE REVIEW
Shelley Price, Karyn Holt

MODIFIABLE RISK FACTORS THAT INFLUENCE METABOLIC SYNDROME IN HISPANIC AMERICANS
Shannon Richard, Du Feng, Dieu-My Tran, Jinyoung Kim, Brenna N. Renn

INCREASING GENETIC TESTING RATES EARLY DETECTION AND PREVENTION OF BREAST CANCER AND OVARIAN CANCER IN WOMEN
Makensey Durrant, Kathleen Thimsen, Paul Thomas Clements

REDUCING DOOR-TO-BALLOON TIME IN STEMI VIA ER NURSE DRIVEN PROTOCOL
Torrie Clontz, Paul Clements, Roseanne Colosimo, Jennifer Gordon

EVALUATION OF AN ADVANCE CARE PLANNING WORKSHOP TO IMPROVE THE SELF-EFFICACY OF HEALTH CARE PROVIDERS
Joy Patrick, Mary Bondmass, Jay Shen

IMPROVING SELF-EFFICACY AND KNOWLEDGE WHILE REDUCING ANXIETY IN HIGH-RISK BREAST CANCER PATIENTS THROUGH STANDARDIZED EDUCATION
Shelly Miles, Jennifer Pfannes, Mary Bondmass, Nathan Slife

PARENTAL EDUCATION ON HUMAN PAPILLOMAVIRUS VACCINATION
Margaret Suprian, Kathleen Thimsen, Steven Palazzo, Jay Shen

IMPROVING NURSE'S KNOWLEDGE AND CONFIDENCE IN TRANSFORMATIONAL LEADERSHIP SKILLS IN THE ONLINE ENVIRONMENT
Tanya Haight, Jay Tan, Mary Bondmass, Jennifer Gordon

FACTORS ASSOCIATED WITH IMMEDIATE POSTNATAL CARE IN LAOS: ANALYSIS OF THE 2017 MICS

Tressa Quayle, Rebecca Benfield, Jennifer Vanderlaan,
Jinyoung Kim, Jennifer Pharr

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IMPROVING ADEQUACY OF SCREENING AND RATE OF INTERVENTION FOR DEPRESSION IN OLDER ADULTS

Kate Roberts

MINDFULNESS EFFECT EXPLORATION ON CLINICAL REASONING DEVELOPMENT IN NURSING STUDENTS

Stephanie Sideras

NATURE-BASED INTERVENTION: STRESS REDUCTION FOR UNDERGRADUATE NURSING STUDENTS

Layla Garrigues, Amber Vermeesch, Kira Mattes,
Dylan Ostendorff, Alessandra Coro

SAFE REST VILLAGES: BEST PRACTICE RECOMMENDATIONS

Sophia Alvarado, Destiny Kramer, Gabriel Kramer, Klaryssa Yap

ETHICAL GLOBAL HEALTH IN NURSING EDUCATION

Isabelle Soule

SCREENING FOR PRONE POSITIONING TREATMENT KNOWLEDGE IN NURSING STUDENTS

Michelle Barton, Jennifer Kepler

CULTIVATING INCLUSIVE SPACES THROUGH CULTURALLY HUMBLE ARTWORK AND DESIGN

Jasmine Yee

UNIFICATION OF ON-CAMPUS AND OFF-CAMPUS CLINICAL LEARNING ACTIVITIES

Larizza Limjuco Woodruff, Stephanie Meyer

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HAHN SCHOOL OF NURSING AND HEALTH SCIENCE

PERCEPTIONS OF BURDEN AMONG CAREGIVERS OF INDIVIDUALS WITH CHRONIC ILLNESSES

Mubarak Aldawsare

CARDIAC IMPLICATIONS OF ED COVID-19 PATIENTS IN A RURAL HEALTH CARE ENVIRONMENT

Pedro A. Colio

ADULTS WITH EXISTING DIAGNOSIS OF HEART FAILURE AND CORONAVIRUS DISEASE 2019

Ronald E. Phillips

PATIENT PERCEPTION OF INTENSIVE CARE UNIT DISCOMFORT

Essa Y. Hakamy

RECURRENT INJURY PERCEPTIONS, THREAT ORIENTATIONS, AND TRAUMA RECIDIVISM

Molly Bauer

INTERVENTIONAL PROCEDURES WITHOUT SEDATION: THE NURSE EXPERIENCE

Catherine De Leon

NURSES AND RESPIRATORY THERAPISTS LIVED EXPERIENCE DURING COVID-19 PANDEMIC

Razel B. Milo, Carol Suarez, Cynthia D. Connelly

HEALTH EQUITY: PARTNERING EMANCIPATORY NURSING WITH RESTORATIVE JUSTICE

Bridget J. Frese

HEALTH DISPARITIES IN SERIOUS CHRONIC ILLNESS FOR NATIVE AMERICANS

Caroline Etland

UNIVERSITY OF UTAH COLLEGE OF NURSING

IMPROVING DIABETES EDUCATION FOR NATIVE HAWAIIAN/ PACIFIC ISLAND PATIENTS

Tumu (Jeremy) Asuao, Adonica I. Kauwe Tuitama,
Katherine Doyon, Michelle L. Litchman

PALLIATIVE CARE REFERRALS IN PATIENTS WITH ADVANCED GASTROINTESTINAL CANCER

Valkyria Bayer, Julie P. Gee

IMPROVING REFERRALS TO DIABETES SELF-MANAGEMENT EDUCATION PROGRAMS

Jessica M. McCulloch, Nancy A. Allen, Julie Neuberger, Michelle L. Litchman

DEVELOPMENT OF A MENTORSHIP FRAMEWORK FOR NEW NURSE PRACTITIONERS IN UTAH

Shauna Olsen, Sara E. Hart, Julie Balk

FACTORS ASSOCIATED WITH PATIENTS NOT RECEIVING COMMUNITY SOCIAL RESOURCES

Ching-Yu (Samuel) Wang, Jia-Wen Guo, Andrea S. Wallace,
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ONLINE EXPERIENCES AND STRESS SYMPTOMS IN SIBLINGS OF CHILDREN WITH CANCER

Sarah E. Wawrzynski, Jia-Wen Guo, Melissa A. Alderfer,
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DEVELOPMENT AND EVALUATION OF A TOOLKIT FOR CAREGIVERS OF CHILDREN WITH PANS
Samantha Whitehead, Gillian Tufts, Heidi Vawdrey, Julie Peila Gee

ENDORSED AND ANTICIPATED STIGMA INVENTORY IN RURAL AGRICULTURAL CHILDBEARING WOMEN
Marcia R. Williams, Jia-Wen Guo, Gwen Latendresse

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COGNITIVE HEALTH: MIND THE EQUITY GAP
Sarah Mckiddy, Paige Bartlett, Heather Wicklein-Sanchez, Basia Belza

EMPLOYMENT QUALITY AND WORKING CONDITIONS OF THE U.S. WORKING CLASSED
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NURSING ENTREPRENEURSHIP: A SCOPING REVIEW
Aunrat Thepna, Barbara B. Cochrane, Marla E. Salmon

IMPROVING TEAM SCIENCE IN RESEARCH: EARLY RESULTS OF TAILORED TRAININGS
Frances Chu, Erin Abu-Rish Blakeney, Nicole Summerside,
Jennifer Sprecher, Laurel Barchet, Brenda Zierler

COLLABORATION FOR EQUITY: STUDENT-FACULTY CURRICULUM CODESIGN FOR CHANGE
Megan Coe, Andrea Cabrera, Sarah Gimbel

INTEGRATING NEUROIMAGING MEASURES IN NURSING RESEARCH
Karl Cristie F. Figuracion, Hilaire J. Thompson, Christine MacDonald

CENTER FOR INNOVATION IN SLEEP SELF-MANAGEMENT
Teresa Ward, Kerryn Redding, Ira Kantrowitz-Gordon,
Jen Sonney, Weichao Yuwen, Oleg Zaslavsky

GLOBAL HEALTH NURSING: THE CONTINUUM FROM GLOBAL TO LOCAL
Pamela Kohler, Sarah Gimbel, Sarah Iribarren, Jillian Pintye, Casey Thomson

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IMPROVING DIETARY AND PHYSICAL ACTIVITY BEHAVIORS AMONG RESIDENTS IN REHABILITATION
Amy Behler, Fionnuala Brown, Kylie Pybus

IMPLEMENTING A PALLIATIVE CARE EDUCATION PROGRAM: A QUALITY IMPROVEMENT PROJECT

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UNDERSTANDING THE LIVED EXPERIENCE OF ADOLESCENTS CONCERNED ABOUT CLIMATE CHANGE
Kailie Drumm, Phyllis Eide

A MINDFULNESS PROGRAM TO REDUCE COMPASSION FATIGUE AND BURNOUT IN NURSES
Teresa Robinson, Angela Hamel, Kathy Christensen

PATIENT AND STAFF PERSPECTIVE ON TELEMEDICINE VISITS AT A COMMUNITY CLINIC
Stephanie Tougas, Cheryl Lewis, Renee Hoeksel

EFFECTS TO NEONATAL OUTCOMES AFTER IN UTERO WILDFIRE SMOKE EXPOSURE
Tara Marko, Von Walden, Julie Postma

WIN HONORS

The Western Institute of Nursing proudly recognizes outstanding members and colleagues with the following awards and honors in 2022.

DISTINGUISHED RESEARCH LECTURESHIP

The Distinguished Research Lectureship recognizes a senior researcher whose research efforts have made significant and sustained contributions to nursing.

Kathryn A. Lee, PhD, RN, Professor Emerita, School of Nursing, University of San Francisco, California

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.

Marie Driever, PhD, RN, FAAN

Donna Velasquez, PhD, RN, FNP-BC, FAANP

ANN M. VODA AMERICAN INDIAN / ALASKA NATIVE / FIRST NATION CONFERENCE AWARD

The Ann M. Voda American Indian/Alaska Native/First Nation Conference Award was established in 2008 by Ann Voda to encourage American Indian/Alaskan Native/First Nation nursing students or nurse clinicians to participate with the WIN community of scholars.

Samantha Old Elk, Mark & Robyn Jones College of Nursing, Montana State University

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.

Laura Larsson, PhD, MPH, RN, FAAN, Professor, Mark & Robyn Jones College of Nursing, Montana State University

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.

Paula M. Kett, PhD, MPH, RN, Research Scientist, Center for Health Workforce Studies, Department of Family Medicine, University of Washington

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.

Karl-Cristie F. Figuracion, MSN, ARNP, AOCNP, PhD Candidate, School of Nursing, University of Washington

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.

Rebecca Benfield, CNM, PhD, Associate Professor, School of Nursing, University of Nevada, Las Vegas

REGIONAL GERIATRIC NURSING EDUCATION AWARD

WIN recognizes evidence of excellence and/or innovation in gerontological nursing education.

Tatiana Sadak, PhD, ARNP, RN, GSAF, FAAN, Rasmussen, Marilee Endowed Associate Professor, School of Nursing, University of Washington

REGIONAL GERIATRIC NURSING RESEARCH AWARD: SENIOR RESEARCHER

WIN recognizes evidence of excellence and/or innovation in gerontological nursing research.

Basia Belza, PhD, MSN, ANP, BSN, Professor and The Aljoya Endowed Professor in Aging, School of Nursing, University of Washington

REGIONAL GERIATRIC NURSING RESEARCH AWARD: NEW RESEARCHER

WIN recognizes evidence of excellence and/or innovation in gerontological nursing research.

Maya Elias, PhD, MA, BSN, Assistant Professor, School of Nursing, University of Washington

FRIENDS OF WIN AWARD

In 2010, the WIN Board of Governors established the Friends of WIN Award. The award is given to individuals or organizations that have made outstanding contributions to the WIN.

Charlie Dobson, CFP, Senior Vice President, Avalon

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. This award waives the registration fee for a student to attend the annual conference.

Cherisse Watts, PhD Student, School of Nursing, University of California, Los Angeles

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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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Jung-Ah Lee, PhD, RN, FAAN, FGSA, Associate Professor, Sue & Bill Gross School of Nursing, University of California, Irvine

Nassrine Noureddine, EDd, MSN, RN, Associate Professor, School of Nursing, California State University, Sacramento

Catherine Van Son, PhD, RN, ANEF, FGSA, FAAN, Professor, College of Nursing, Washington State University

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ISBN 978-0-692-86693-1

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