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Volume 57

HEALTH AND EQUITY IN CHANGING ENVIRONMENTAL AND SOCIAL CLIMATES

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WESTERN INSTITUTE OF NURSING

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

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

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

COMMUNICATING NURSING RESEARCH
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
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Volume 44: Transitions: Unifying Practice, Education, and Research to Improve Health
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Volume 47: Taking It Global: Research, Practice, and Education in Nursing
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Volume 55: Justice, Equity, Diversity, and Inclusion (JEDI): Creating a Nursing Force for Change
Volume 56: Leveraging Technology to Advance Nursing and Equity in 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 57th Annual Communicating Nursing Research Conference, "Health and Equity in Changing Environmental and Social Climates," was held in Salt Lake City, Utah from April 17-20, 2024.

The keynote address was delivered by **Barbara Sattler**, RN, DrPH, FAAN, Professor Emeritus, School of Nursing and Health Professions, University of San Francisco. State of the Science presentations were delivered by: **Teri A. Murray**, PhD, PHNA-BC, RN, ANEF, FAAN, Professor and Dean Emerita, Trudy Busch Valentine School of Nursing, Saint Louis University; **Julie Postma**, PhD, RN, Associate Dean for Research, Professor, College of Nursing, Washington State University; **Elizabeth Schenk**, PhD, MHI, RN, FAAN, Associate Vice President, Environmental Stewardship, Providence.

Three award papers were presented:

Distinguished Research Lectureship Award: **Lissi Hansen**, PhD, RN, May E. Rawlinson Distinguished Professor, School of Nursing, Oregon Health & Science University

Carol A. Lindeman Award for a New Researcher: **Scott S. Christensen**, PhD, MBA, APRN, ACNP-BC, Adjunct Assistant Professor, College of Nursing, University of Utah

Carol A. Lindeman Award for a New Researcher: **Kayla D. Longoria**, PhD, MA, RN, Postdoctoral Scholar, School of Nursing, University of California, San Francisco.

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

The conference was planned and organized by the WIN Program Committee, and we extend our gratitude to Committee members: Cara Gallegos, Chair, ID; Michael D. Aldridge, CO; Linda S. Edelman, UT; Perry Gee, UT; Martha L. Grubaugh, CO; Seiko Izumi, OR; Ahlam Jadalla, CA; Hannah Jang Kim, CA; Mary Koithan, WA; Cherry Leung, CA; Lauri Linder, UT; Kristin Lutz, AK; Paula Meek, UT; Joanne Noone, OR; Jessica Rainbow, AZ; Krista Scorsone, CO; Ruth Taylor-Piliae, AZ; Alice Tse, HI; Teresa Ward, WA; and Fang Yu, AZ.

We extend our gratitude to all those who submitted papers and participated in the 2024 conference.

Annette S. Nasr, PhD, RN, MPA, NE-BC
President, Western Institute of Nursing

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

State of the Science Address in Practice Paper

NURSING PRACTICE, HEALTH, AND OUR PLANET

Elizabeth Schenk, PhD, MHI, RN, FAAN
Chief Environmental Stewardship Officer, Providence
Research Assistant Professor, Washington State University College of Nursing

It is an honor to be invited to speak with the Western Institute of Nursing membership and conference attendees. I am a westerner at heart as I live in Montana, am academically affiliated with Washington State University, and work for a health system with hospitals and clinics across seven western states. Our independent spirit and quest for innovation serves us well as we wrestle with today's health and equity challenges. I have spent my career concerned about and trying to find solutions for the negative, unintended impacts of healthcare on our natural environment, our planet. I have focused on hospitals, as they represent about half of the pollution that comes from healthcare. Before exploring that and sharing some challenges and solutions in health care, I would like to first discuss healthcare pollution in the context of our broader environmental crises.

Planetary Health

Humans are dependent on the planet. Everything we have, including our bodies and our health, comes from the gifts of the planet. Atoms, cells, organs, air, water, food, shelter, stability, materials for industry, inspiration for aesthetics and arts. We would not have these if not for the stuff of this planet. We may differ in our sense of where these gifts come from, whether created by God, or intelligently designed, or evolved over billions of years. But what we can agree on is that these are features of this world, this planet, Earth. The Earth's systems are immensely complex, inter-related, with feedback loops and symbiosis that allow it to continually spur life, in balance with itself, for eons.

Earth is unique. We don't know if there are other planets as amazing as ours, with other life forms. Astronomers have been looking for decades. They believe there are billions of planets in our own Milky Way Galaxy (NASA, 2024), where our solar system is located. Of those, the closest that may be habitable is 14 light years away (NASA, 2016), or almost 82 trillion miles. We don't know yet if potentially habitable planets hold life and what it is like or how complex it may be. Yet we do know about the life on our planet. And it is amazing. We are constantly discovering new species, learning more about communications among plants and animals, finding unknown chemicals and materials found in nature, and feedback loops that help nature keep itself in balance. It is teeming with incredible life from the smallest cell to the largest complex animal or forest. It is filled with abundance, and so much opportunity for health, for human thriving. We know a lot about how to live equitably and sustainably on our precious planet. We have technologies that provide solutions, a vision for sustainable materials and systems, and a yearning for equity and justice. Living well and healthfully on a healthy planet is possible.

In recent decades, there is a better understanding and appreciation of the necessity for the planet's ecosystems to function as they have for millennia, for humans and other species to thrive. It is better understood that several important planetary systems are at risk, and the impact of that risk on human health has led to the concept of Planetary Health. Planetary Health was defined in 2015 as “the health of human civilization and the state of the natural systems on which it depends” (Whitmee, et al, 2015). Planetary Health is related to but different than environmental health, eco-health, one-health, global health, or integrative health, though all share elements. Planetary Health addresses the largest context we have, planet Earth. It considers complex adaptive systems, complexity science, interdisciplinarity, considerations of equity and justice, while focusing on the health of humans, other species, and ecosystems, to understand interactions and impacts of parts on the whole, and impacts of the whole on the parts, with an example being an interest in impacts of human actions on the health of all the rest.

Yet not all is well. Multiple planetary level systems are at risk (Rockstrom, et.al., 2009). Four examples that are pertinent to health and healthcare are these. First, climate change, which is likely the best known. Largely because of anthropogenic, or human caused, greenhouse gas pollution, the planet’s atmosphere retains excess heat, which drives the warming of the oceans and ambient temperatures, worse storms, floods and droughts, more frequent and intense wildfires, and many other impacts on health. We are living with these changes now, and they will worsen (Romanello, et.al., 2022). Importantly, they do not impact us all equally. More exposed communities and individuals at risk are more impacted by heat, smoke, storms, vector borne disease, financial harm, and societal unrest related to climate change (LeClair, Evans-Agnew, & Cook, 2022). This violates our sense of equity and justice as nurses.

Next, biodiversity loss. The planet has many complex and marvelous species, which continue to evolve, and which are still being discovered. However, more that 25% of species on Earth at risk now with50% expected by the end of the century (The World Counts, 2024). Biodiversity is important for human health. Pollinators are responsible for fruits, vegetables, and grains to form. Fishes of the sea feed over 3.5 billion people (Convention on Biological Diversity, 2018). Nature is an amazing pharmacy, and about half of our commonly used drugs were designed by nature first (Bernstein & Ludwig, 2008). Our shifts in land-use lead to deforestation and persistent pollution, decreasing habitat for wild species and the amazing contributions they make.

Novel entities, on human-made chemicals that our bodies are not used to present significant health risks. This is the area of traditional environmental health, which is concerned about exposures to toxic chemicals in air, water, soil, and products. About 350,000 chemicals have been registered for production over the past 30-40 years (Wang, et.al., 2020) with about 700 added to the US inventory each year (Krimsky, 2017), most of which have not been adequately tested (Muir, et. al., 2023). Human creation and use of plastics have proliferated broadly with applications across all sectors and multiple settings, including in health care. Microplastics and nano plastics resulting from the breakdown of plastics in nature, have been found in air, water, soil, breastmilk, and atherosclerotic plaques (Kozlov, 2024). Scientists are just beginning to understand the potential impacts on health, as we live through a natural experiment of exposure.

Resource consumption is a familiar issue in healthcare with its dependency on single-use, disposable items. But it is a global reality as well. Overconsumption results in biodiversity loss from land use change as mentioned above. It creates thousands of tons of garbage each year. Importantly, the manufacturing, packaging, and shipment of products used make up more than half of global greenhouse gas emissions. Using less is a simple concept, but not so easy to achieve with the commercial systems humans have created.

Humanity is a pivotal point in time. We understand without doubt the seriousness of our planetary and equity crises. On our current trajectory, we will see significantly more warming with increased storms, fires, pollution, and heat. We will see changes in drought and flooding, impacting agriculture, urban systems, and in some parts of the world, an inability to support human life. Yet, it does not have to be that way. We can also see solutions on the horizon. We see the shift to renewable electricity increasing each month. Millions of people around the world are working on viable innovations to help communities be more resilient, and our energy sources and products to be less harmful. There are reasons for optimism. The choice is ours. It is up to us, the humans who are alive right now, to help push our leaders, governments, and businesses to choose well. It is up to us in our professional lives as nurses to help our organizations and institutions make progress toward environmentally safe practice. It can be overwhelming to consider these issues and wonder where to begin. But we do have pathways to success, and we will explore a few next.

A Trip Across Time

Each of these examples demonstrate change, sometimes rapid change that seems obvious in retrospect but was impossible to imagine before. This kind of rapid change is possible to help move healthcare to be safer for the planet.

The smart phone was developed less than 20 years ago. Most nurses are older than 20, so most of us used dial up phones that served one purpose, to make a call. We would not have imagined a computer in our hand that did things we had not even heard of. Now we take them for granted and depend on them for many things each day.

We are in the midst of a shift in our transportation sector to electric vehicles. It is happening before our eyes now as they become more common and charging infrastructure is spreading across the nation. This is predicted to grow each year, and in five or ten years we may look back and say with disbelief that we actually put flammable fuel in our cars and pumped out lethal air pollution that killed millions of people a year.

Likewise, we are living through a shift from fossil fuel-based energy sources to renewable, emissions free sources. Twenty years ago, these technologies were out of reach because of cost and lack of deployment. Now they are becoming the norm. Soon, we will look back and shake our heads at the harm we caused through the combustion of so much oil and gas.

In healthcare, much progress has been made. It was not so long ago, perhaps thirty-five years, that patients were allowed to smoke in their beds. That shifted to nurses taking patients outdoors to smoke, and now for close to two decades, we commonly have tobacco free hospitals and clinics. That was not an easy transition as it infringed on people's perceived rights, while pushing up against addictions. Yet the choice was made that healthcare couldn't put innocent bystanders at risk, nor could it support a behavior with such clear health risks.

There have been many studies and articles published on the greenhouse gas emissions and other pollutants from healthcare in the United States. We are more aware of the problem, and solutions are emerging as architects and engineers and nurses too design hospitals of the future that are non-toxic and non-polluting while ensuring equitable, affordable, accessible care.

Single-use plastics are ubiquitous in healthcare. There is more awareness of this challenge, and a few solutions appearing. Yet, for change to occur at scale, better ideas are needed, alternatives to toxic plastics, safer products that serve the same purposes, reuse, and repurposing of existing plastics where possible.

In the early years of this century, healthcare underwent a wake-up with the efforts of the Institute for Healthcare Improvement and others that called us to higher quality care. They shined the light on healthcare acquired conditions (HACs) like infections, falls, medication errors and surgical errors, and healthcare went from assuming such events would happen to devoting considerable resources and knowledge to ensuring that they don't. Today, we know that we are largely ignoring another healthcare acquired condition, that of healthcare generated pollution. This generates the same magnitude of harm as other HACs (Eckelman & Sherman, 2016). This harm is from greenhouse gases, chemicals of concern, excessive resource consumption and waste.

We may chuckle at the absurdity of how things used to be. Yet, there may be a time in the not-so-distant future when we are aghast that we were careless with resources, fossil fuels, and the condition of the planet, and the inadvertent harm this caused for the people, families and communities we care for.

Nurses are Part of the Solution

Nurses around the globe are at the crux of health and healthcare. There are almost 28 million nurses in the world (WHO, 2022), and nurses are present in most healthcare interactions. Our education prepares us for caring in context, holistically, considering relational, financial, environmental, and other contextual realities that impact health. Nurses are natural interdisciplinarians and team builders. Nurses are solutions oriented and often have practical ideas that solve a specific problem, while they can be visionaries and broad thinkers as they weave together complex ideas with real-world challenges. Nurses are the most trusted professionals in the United States each year (Gallup 2024) for good reason. Our ethical foundations are strong. Our centuries-long commitment to care for all, equitable and inclusive, gives us trusted, powerful voices.

In our Scope and Standards of Practice (ANA, 2021), the definition of nursing is given as "Nursing integrates the art and science of caring and focuses on the protection, promotion, and optimization of health and human functioning; prevention of illness and injury; facilitation of healing; and alleviation of suffering through compassionate presence. Nursing is the diagnosis and treatment of human responses and advocacy in the care of individuals, families, groups, communities, and populations in recognition of the connection of all humanity."

The definition of Planetary Health, as stated above is "The health of human civilization and the state of the natural systems on which it depends."

A slight update to merge these two important definitions could be "Nursing integrates the art and science of caring and focuses on the protection, promotion, and optimization of health and human functioning; prevention of illness and injury; facilitation of healing; and alleviation of suffering through compassionate presence. Nursing is the diagnosis and treatment of human responses and advocacy in the care of individuals, families, groups, communities, and populations in recognition of the connection of all humanity ***and the state of the natural systems on which human health depends."***

Planetary Health nursing has been described as an expansion of historical nursing focus, with applications for research, education, advocacy, and practice (LeClair & Potter, 2022). Others have described key principles for Planetary Health education, the first of which is developing a planetary health lens (Stone et.al., 2018). And others have presented nursing innovation as a needed contribution to the complex, overlapping, environmental, social, economic, and ethical challenges brought to the fore in Planetary Health (Bellegarde, et.al., 2023).

The Providence Example

Providence is a large Catholic not-for-profit health system in sever western states. With 51 hospitals and over 1000 clinics, and 38,000 nurses, it has served in communities for over 150 years. In 2020, Providence leadership made a significant commitment to reduce greenhouse gas emissions and other pollutants by 2030. This was important because healthcare is polluting, and we don't want to contribute to harm. Further, we are seeing the increase in patient visits during extreme weather events, and no we need to adjust our own preparation for the changes afoot.

There are four primary categories of greenhouse gases (GHGs), the chemicals that are causing the warming of our planet. Carbon dioxide is the largest at 79% of total emissions (EPA, 2024). Methane, nitrous oxide, and fluorinated gases comprise the remainder. These chemicals have different global warming potentials, which is a measure of their potency. For the ease of discussion, scientists convert these gases to a "carbon dioxide equivalent". This is indicated by CO2e. These gases are often expressed as metric tons of carbon dioxide equivalent, or MTCO2e. A further shorthand for these emissions is carbon. So, to reduce carbon is to decarbonize, which means to decrease the greenhouse gas emissions form a business or entity. GHGs are measured using the international Greenhouse Gas Protocol (2024), which sorts sources into three scopes. Scope 1 refers to emissions combusted or released into the atmosphere on site, called direct emissions. Scope 2 emissions are from purchased electricity and steam. Scope 3 emissions are from all other sources including purchases, waste, business travel, employee commuting, and investments. In healthcare, Scope 3 typically comprises 80% of emissions, so this guides us where to focus our efforts.

In Providence, we have developed a three-pronged strategy to drive change. Three approaches are commonly used in climate work are mitigation (reduction of greenhouse gas pollutions), adaptation (adapting to existing and future changes and building resilience to weather these changes), and advocacy (using our voice for change). Our Providence strategies mirror those themes.

Mitigation

WE ACT is our mitigation strategy. This stands for Waste, Energy/water, Agriculture/food, Chemicals, and Transportation. These are the primary sources of GHG pollution, and we have actions and projects underway for all. First, waste is a significant challenge in health care. We have established a goal to divert more than half of all waste away from landfill and hazardous streams by 2030. We consider waste in three categories, *Disposed* waste goes to landfill, autoclave, or incineration. *Diverted* waste is that which that would be landfilled but we are sending elsewhere for a higher-value use such as composting, recycling, reprocessing, or donations. *Avoided* waste is the waste we don't create in the first place by avoiding single-use disposable items where possible, and developing more efficient systems which require less disposal.

Energy and water are important in healthcare as hospitals are 2.5 times as energy intensive as office buildings. We emphasize energy efficiency which reduces the amount of energy we use. We purchased Renewable Energy Credits (RECs) to supply renewable electricity from utility providers. We have performed water audits and are working on numerous efficiency strategies as most of our sites are in areas of drought.

Agriculture and food are significant contributors of greenhouse gases and are of interest to our caregivers. We are working to decrease the carbon intensity of meals served, by choosing plant forward menu choices and managing portion sizes. We are also working on overall waste reduction. We compost food waste in our kitchens, we try to reduce single-use plastic service ware and prepare food efficiently to avoid unnecessary creation of waste.

Chemicals are an important consideration in healthcare. First, we avoid chemicals of concern wherever possible, and include instructions for safe handling to avoid exposures. We address chemicals that are greenhouse gases, specifically volatile anesthetic agents, nitrous oxide, and inhaler propellants. We have successfully reduced emissions from these items across our hospitals.

Transportation is now the largest sectoral source of emissions in the United States. We have reduced business travel by supporting remote work, and meetings. We support employee commuting by providing transit passes, bicycle parking, preferred carpool and vanpool parking. And we work with our suppliers to ensure that they use efficient vehicles and efficient routing to deliver the goods we need.

All this work is very data dependent. We have created the WE ACT Scorecard which tracks usage, cost, and carbon emissions for over 40 elements each month since January 2019. We compare normalized data across the hospitals to rank their performance, identify outliers, and help define best practice in this area of health care that has been understudied. We have developed the WE ACT Profile score which creates a single numerical score on a quarterly basis to easily visualize and track progress.

An important element of working with 117,000 employees is communication and engagement. We encourage the building of green teams or affinity groups at all our hospitals. We host a very robust SharePoint site with many examples of information and resources. We publish a bi-weekly newsletter for all caregivers, and monthly public facing blogs on environmental stewardship. We have good response from many caregivers about the initiative and the available resources.

We are on the right track. We have reduced the greenhouse gas emissions in our hospitals by 12%. Several hospitals have reduced waste by over 50% and all are on track to optimize their waste by 2025. 89 facilities are now operating on 100% renewable electricity. We have reduced carbon emissions from anesthetic agents and nitrous oxide significantly, as well as business travel. We have designed and developed a one-of-a-kind environmental stewardship database and scorecard to guide decisions and reporting.

Adaptation/Resilience

Since committing to the Department of Health and Human Services Climate and Health Care Pledge (HHS, n.d.) we have developed our Climate Resilience Plan. We call this strategy We REACH. We are focusing on three primary elements. First, our buildings or infrastructure. We manage nearly 40 million square feet of buildings, many of which were not designed for high temperatures or heavy smoke. We are working to build energy capacity in our buildings. And ways to monitor the status of the buildings during extreme events. Second, we are working with our clinical care providers to ensure that they have the resources and knowledge they need to care for people during extreme events and to adapt to chronic conditions that are impacted by a warming planet. This also includes addressing the needs of the caregivers who are also living in the communities that are experiencing the extreme events. Third, we are working with community partners across all our seven states. We hope to support them in building resilient communities which can better survive extreme events and long-term changes to the fabric of society.

Advocacy/Leadership

The final arm of our overall strategy is our advocacy work, and we call this We SHARE. In this area, we value relationships with our elected officials, professional organizations, government agencies, and with other health systems. We work together to meet many of the same goals. In the past five years, many of our federal agencies and national organizations have embraced decarbonization as an important strategy for healthcare. For example, the aforementioned Health and Human Services pledge asks participants to reduce scope one and two greenhouse gas emissions by 50% by 2030, to develop a climate resilience plan in 2023, and to do a full Scope 3 greenhouse gas assessment in 2024. Another example is the Joint Commission (TJC, 2024), which has established a voluntary Sustainable Healthcare Certificate. Providence is embracing this opportunity, and all 51 hospitals will be participating. When we work together, we go further, and that is the power of partnerships.

Clinical Considerations

At Providence approximately 90,000 employees are clinical caregivers of some kind, with 38,000 being nurses. Though clinicians are the decision makers in health care, clinicians are often left out of decisions about environmental stewardship. We are trying to change that. We work with clinicians on anesthetic agents, nitrous oxide, changes in food and menus, waste management, waste optimization, and engagement. We look forward to increased interaction as more clinicians learn about the work we are doing and help to define best practices in clinical care delivery that supports our environmental stewardship goals.

The idea of nurse sensitive environmental indicators arose from working with nurse sensitive quality indicators. We proposed that regarding environmental stewardship, some elements would be more likely impacted by nursing, nurses would have more proximity to them, or nurses would be able to impact those elements in their daily practice. We interviewed ten nurses or other leaders who were working with nurses on environmental stewardship from across the nation. We used the WE ACT framework as a basis for questioning to explore aspects of environmental stewardship that nurses have more impact on. The interviewees reported that nurses have particular impact on waste, agriculture and food, and chemicals. This helps guide future planning, to give ideas for focus and expansion.

The Climate and Health Tool (CHANT) was originally developed in 2017 (Schenk, et.al., 2020) and underwent exploratory factor analysis the following year (Schenk, et.al., 2021). Originally designed for nurses, it was expanded to include all health professionals in 2020. It underwent confirmatory factor analysis in 2022 (Winquist et.al., 2023). The tool is available on the Washington State University website, and it has been designed to invite other investigators to use. Since 2019, it has been used by other investigators 91 times. These investigators have been from 18 different nations. Respondents have been from 46 nations. And the tool has been translated into 10 languages. It is fascinating to see results over time and from across the world. Broadly speaking, health professionals have a moderate to high awareness of the health impacts of climate change. They perform more pro-environment behaviors at home than work. They contact elected officials about climate and health concerns never to rarely. Their reasons for action are concern for clean air and water, the future and family. Reasons for inaction are that they feel overwhelmed, they feel they don't know enough, or they don't know what to do.

In summary, we are living in an era of environmental and equity crises which are impacting health. Therefore, these are nursing issues. A planetary health framework can be helpful to both expand our focus of attention and help circumscribe what can seem like an overly complex set of problems. It is important for us to recognize that a better future is possible and yet that this is dependent on our actions and leadership. We have examples of success, we have tools and resources, and we have the strength that nurses bring to this and other challenging situations.

After all, this planet is the only one we've got, and it is the best home imaginable for at least 82 trillion miles. For the health of all people and other species, today and for generations to come, it is in our hands to turn the arc of our future toward a healthier, more equitable society while caring for this incredible planet.

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The Distinguished Research Lectureship Award Paper

FROM THERE TO HERE AND A PROGRAM OF RESEARCH: I HAD NO IDEA

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Thank you very much to the Western Institute of Nursing Board of Governors and the Program Committee for selecting me for this honor and recognition. I am proud and delighted to be the recipient of the 2024 Distinguished Research Lectureship Award and be recognized for the value of nursing science I have brought into an area primarily dominated by medical science. I would also like to thank Drs. Anne Rosenfeld and Susan Bakewell-Sachs for recognizing my work and nominating me for this prestigious award.

I had no idea that I would ever be recognized for my research in this extraordinary way. It is truly an honor. I have focused on a stigmatized and understudied group, patients with liver diseases. Although, my path as a nurse researcher may have been lonely at times, it continues to be absolutely worth every step. I hope to inspire others, and in particular students, to consider research with understudied stigmatized populations and their caregivers/families with a goal of developing scientific knowledge to improve their health care.

Over the past 20 years, I have had the opportunity and privilege to have an academic career that allowed me to follow my research and teaching passion. My wish with this presentation is to encourage others to embark on a journey that keeps you curious, inspired, and engaged. I focus on patients with liver diseases and their caregivers/families with a hope to increase awareness about liver diseases, patients' multiple symptoms, quality of life, treatment decision-making, and need for end-of-life and palliative care.

From There to Here: The Beginning

First, a little about my pathway. I am from a very small farm town in Denmark with a very small elementary school. I was one of only six students in my class from 1st to 7th grade. For grades 8 to 10, we were bussed to a school in a larger town. After 9th grade, I attended gymnasium – an education-based program that prepares students for university. After gymnasium I had the opportunity to work as an unlicensed nursing assistant in a nursing home. The nursing home was in an old villa with only 20 residents living there. They were aged 50 to 96 with a variety diagnosis. What I liked about working there was that a lot of thought went into the care we provided: care that required both thinking and doing. In the home I encountered dying residents and experienced how peaceful death could be. I enjoyed interacting with the residents and the relationships we developed. Some of them needed physical care; others were there because of mental challenges. Being with these residents inspired me to learn more, and I decided to become a nurse. Two years later, I was accepted into a school of nursing. At that time, there was only one 3 1/2-year diploma-based nursing degree available in Denmark.

After graduation I worked first on a medical gastroenterology unit and then in an intensive care unit (ICU) in a new hospital outside Copenhagen. When I finally began to feel competent as an ICU nurse, my husband was offered a job in the United States (US), and he thought it would be a great opportunity. However, I was not so sure, even though I told myself that we could always move back. I believe that I needed to own my part of this potentially life changing decision. After 6 months of considering, I made my decision and agreed to the move.

I had no idea that it would take close to 2 years to get work-permission because we were applying to become US resident aliens. My husband could work, but because I did not have a job offer in the US, I could not. So, I decided to use my time to study for the Commission on Graduates of Foreign Nursing Schools (CGFNS) qualifying examination, which I took in New York.

Clinical Experiences in the US

I had no idea how different nursing would be in a US ICU compared to my experiences in the ICU in Denmark.

The day after I became a resident alien, I was hired as a staff nurse in the ICU at Framingham Union Hospital in Massachusetts. Almost immediately I noticed how differently nurses were treated as compared to physicians. I had never before felt that I was not as important as physicians and was used to being on a first name basis with all members of a healthcare team – physicians, nurses, and other professionals. Also, some of the procedures that nurses were allowed to perform had not been allowed for Danish nurses and visa-versa. Most striking was the use of life-sustaining treatments. Elderly patients often received very aggressive care in their first 24 - 48 hours stay only to discover that they had an advance directive stating wises for less aggressive care. This saddened me, and I often wondered whether some of them would have preferred less aggressive treatments in exchange for time at home before dying. Also, in Denmark some life sustaining treatments were more contradictive than in the US (e.g., in Denmark Swan-Ganz catheters were used less often for patients with a myocardial infarction). The extent to which life-sustaining treatments were used became challenging for me. I wanted patients and families to have more of a say in their treatments but how would I go about that?

After I worked at Framingham Union Hospital for about 3 years, my husband's job led to a transfer to Vancouver, WA. Inspired by several of my nurse colleagues who were in university-based nursing programs, I decided to take this move from the East Coast as opportunity to do the same. I wanted and needed to learn more about the use of aggressive care so I could be a better advocate for patients and their families. So, after my husband and I arrived in Vancouver, I had all my Danish educational papers professionally translated into English and notarized so that I could pursue a master's degree in nursing.

Educational Experiences in the US

I had no idea how challenging it would be to become a student in the US educational system.

I visited several nursing programs in the Vancouver/Portland Metropolitan area but none of them would accept my Danish diploma-based nursing degree or even transcripts. The Danish school system at the time was organized around year-based terms rather than quarters or semesters, making it difficult for comparisons between courses. I became disheartened because I was already working as a registered nurse and believed that it should count for something. But my stubbornness or, as I have later learned, a better word may be "perseverance" took over. I mailed my educational papers to Washington State University (WSU) College of Nursing in Pullman. After months of waiting, Dr. Thelma Cleveland offered me admission into the RN-BS program that fall pending completion of many pre-requisite credits during the summer. I jumped at what seemed at the time like my only opportunity and was admitted into the program at the WSU College of Nursing's Vancouver Campus. I was grateful for this chance to enter into the US educational system. The RN-BS degree expanded my knowledge and clinical skills, but it still did not provide the knowledge and information I desired related to the conduct of research. I realized that I needed a master's degree.

I had no idea that I would be placed on academic probation once I was accepted into the Master's program at the Oregon Health and Science University (OHSU) School of Nursing. I knew that I had not done well on the Graduate Record Examination (GRE) test but did not think that my application was that bad. Evidently it was. I am grateful to Dr. Sue Davidson who became my contact for the Master's program and who provided priceless guidance as I re-wrote the application. During my time as a clinical nurse specialist (CNS) student, I enjoyed learning from, and particularly my interactions with, Dr. Roberta Erickson who taught me the importance of nursing science, how to conduct it with rigor, and how to disseminate findings. I presented my thesis, "Effect of Hepatitis B Vaccine Temperature on Injection Pain," as a poster presentation at the Western Institute of Nursing (WIN) conference in 1996.

I had no idea how intimidating presenting the poster and attending the conference would be, but at the same time so inspiring and validating. That memorable experience would lead me to become a member of WIN two years later, in 1999.

After completing the Master of Science (MS) degree, I taught at Clark College's Nursing Program for one year while applying for admission to the PhD program at OHSU School of Nursing. The use of life-sustaining treatments in the ICU continued to percolate in my brain, and the MS degree did not provide me with the research knowledge I had assumed it would but inspired me to continue my educational journey to better understand research.

I had no idea what a PhD degree would entail and soon learned how little I knew when I met Dr. Patricia Archbold on my way into the OHSU School of Nursing to begin the application process. I asked her where I could find the PhD office, and she told me that such an office did not exist but that she might be able to help me. Soon after, I scheduled a meeting with her and Dr. Barbara Stewart, both well known for their research in caregiving. They became my mentors and co-sponsored my first federal grant, an F31 (F31-NR07530). During my time as a PhD student, I had the good fortune to receive support from another federal grant, the OHSU School of Nursing T32 (T32-NR07048), as well as the F31. I was also able to secure funding for an Alzheimer's study to examine the experiences of family members after receiving the results of the autopsy report of their demented relative's brain. Another student and I were able to obtain funding for a program to provide palliative care education to nursing assistants working in a nursing home. Before choosing my dissertation topic to describe family caregivers' experiences in making life-sustaining treatment decisions for elderly relatives, I developed many research questions, some good and some not very good, which I realized was common among PhD students. For my work I defined caregivers as an adult unpaid spouse, partner or identified significant other, parent, adult child or grandchild, sibling, other relative, or a close friend.

I had no idea how influential the concept caregiving would become for my program of research. I was initially reluctant to interview caregivers for my dissertation because the caregiving literature seemed too overwhelming at the time; little did I know. The education I received during the program and the support, help, and encouragement from my mentors and other faculty broadened my view and helped me grow as a nurse researcher.

After completing my dissertation, I was so fortunate to earn a John A. Hartford Foundation (JAHF) Building Academic Geriatric Nursing Capacity Postdoctoral Fellowship. There were seven of us in this first cohort. The postdoctoral fellowship was a gift, which I completed at the

University of Washington School of Nursing. It was amazing and enriching. Not only did it give me time to publish and to explore what my next steps would be (Hansen, 2004), but attending the JAHF Leadership conferences provided extraordinary learning and networking opportunities. Also, because of my strong interest in end-of-life and palliative care, life-sustaining treatment-decision making, and caregiving, I took advantage of the ability to plan my time and completed a palliative care education and practice program at Harvard Medical School. Because the amount of time the education and practice program took, I did not think that I would be able to complete such a program or similar as a newly hired faculty.

From Oregon Health & Science University School of Nursing to the Medical Center

I was hired as a faculty at the OHSU School of Nursing in 2003. It was a perfect match for me because I would be teaching end-of-life and palliative care in the undergraduate nursing and RN-BS programs. I knew that I needed to become familiar with the clinical practice settings at the OHSU Medical Center to get my research started. During my hiring process, I contemplated how best to make this happen and planned to do a few 12-hour day and night shifts in the four ICUs.

I had no idea how this out of the box inclusion of 12-hour shifts would become instrumental in getting connected to healthcare professionals at the medical center. During one of my first 12-hour shifts, I was fortunate to meet Dr. Mark Chestnutt, a pulmonologist. I shared with him my idea of conducting a study on life-sustaining treatment decision-making, and he was very interested in being a part of such a study.

Why Study Liver Disease?

Chronic Liver Disease and Cirrhosis

As an ICU nurse I found the symptom presentation and physiology in patients with liver diseases and often complex family dynamics fascinating. Because one etiology of liver disease is alcohol use, patients with liver diseases and their family members/caregivers are often stigmatized due to an assumption that the patients are substance abusers. Because there is a possibility of a liver transplantation, I hypothesized that life-sustaining treatments would be a major focus of patients with liver diseases in the ICU. Fewer than 11,000 patients receive a liver transplant yearly, 10% die while waiting, and another 10% are too sick to be transplanted (United Network for Organ Sharing, 2024). Currently, 10,000 patients are waiting on the liver transplant waiting list. The number of transplantations is small in comparison to how prevalent and significant liver diseases are in the US and globally.

Worldwide chronic liver disease (CLD) is a neglected public health problem associated with substantial disability (Devarbhavi, 2023). It is estimated that 1.5 billion people have CLD, which accounts for 2 million deaths each year. The most common etiologies of CLD and cirrhosis are non-alcoholic fatty liver disease (NAFLD), chronic hepatitis B virus (HBV), hepatitis C virus (HCV), and alcoholic liver disease (ALD; Cheemerla, 2021). Although the cases of CLD have been reduced in some parts of the world due to vaccination and anti-viral treatments for hepatitis, other causes such as substance abuse and metabolic syndrome have increased.

In the US, the number of adults with liver disease is 4.5 million, and of those approximately 633,000 have cirrhosis (Centers for Disease Control and Prevention, 2018). There are about 60,000 deaths from liver disease annually in the US. End-stage liver disease (ESLD) is the final stage of cirrhosis, an irreversible scarring of the liver**.** Complications specific to ESLD and for which patients are admitted to the ICU include hepatic encephalopathy, ascites, variceal bleeds, and bacterial peritonitis. Additionally, hepatocellular carcinoma (HCC) is the 6th most common cancer worldwide and the most common type of liver cancer. In the US, it causes approximately 30,000 deaths annually. If the cancer is diagnosed early, the survival rate is 70% at 5 years; at an advanced stage the survival rate is less than 20% at 5 years (Calderon-Martinez, 2023).

Because of ESLD patients' limitations in performing activities of daily living (ADLs) and instrumental activities of daily living (IADLs) and their complex symptoms, they require assistance from caregivers in their homes (Saleh, 2022). Prior to finishing my first grant application on life-sustaining treatment decisions in liver disease and submitting it for funding, Dr. Chesnutt showed me the critical importance of obtaining support and input from various parties (e.g., administration, ICU managers, attendings). We met with directors of nursing and others. I learned that patients with liver disease in the ICU were the most expensive group to care for, and therefore such a study was well supported. I continued this strategy of meeting with various parties, being inclusive and open, and seeking input on my work prior to submitting to a funding agency.

I had no idea about the politics between surgical and medical providers surrounding patients with ESLD awaiting a liver transplant. One might say that I was "blissfully ignorant." Once I did become aware and prior to completing the first proposal, I explored views among providers about the importance of nursing research, any barriers to such research, and from whom to obtain knowledge and support to move my work forward. With the help of Dr. Sherrie Schuldheis, Director for Nursing Research at the VA Portland Health Care System, I was able to manage the politics and move forward with submitting the grant application.

As I developed my proposal, one prior research study struck me, because it showed a clear need to improve end-of-life care in the ICU. The purpose of the multimillion and multisite Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT) was to improve outcomes for seriously ill hospitalized adults with better information and decision-making (Connors, 1995). The sample included 9,105 adults hospitalized with one or more of nine life-threatening diagnoses with an overall 6-month mortality rate of 47%.
The findings from the study that stood out to me were that 46% of do not resuscitate (DNR) orders were written within 2 days of death and that half of the patients had moderate to severe pain during more than 50% of the last 3 days of their lives. Furthermore, patients with liver failure were found to experience moderate to severe pain similar to patients with colon and lung cancer. That patients with liver failure experienced the same level of pain as patients with cancers was very surprising to me.

Following my passion to examine life-sustaining treatment decision-making, I submitted my "End-Stage Liver Disease and Treatment Decisions" study using ethnographic methods to the National Institute for Nursing Research (NINR). The study was funded (R21 NR009845). Six patients, 19 family members, and 122 health care professionals participated in the study. The patients were either on the transplant waiting list or being medically worked up to be registered on the list. Eighth-six life-sustaining treatment decisions were made but only three comfort care decisions for the six patients over the course of their 45-day stay, which supported my hypothesis (Hansen, 2012). The overarching theme describing the treatment decision-making process was "on the train." Families were positioned as passengers on the train with limited control, unable to fully understand the decision-making process. Healthcare professionals were not able to clearly convey information about the medical status of the patients. To elicit information, families developed proactive strategies to understand what was really going on with the patient. In one family, the members planned that each family member would ask the same questions of various professionals, and then they would compare their answers to get a better understanding about the patient's condition. Another family asked one specific question of healthcare professionals each day: "Is [the patient] getting on the waiting list?" I concluded that to help improve the decision-making process for patients, family members should be included in non-immediate life-saving decisions and their understanding of the information provided should be verified early on. During the study two patients died, one improved, one was referred to hospice, and two were transplanted later after being transferred out of the ICU to a stepdown unit. None of the patients received a palliative care consultation. This is striking because these patients were too sick to receive a transplant.

During the study we also had the rare opportunity to capture when a patient is on the liver transplant waiting list and develops serious ESLD related complications and is placed into a temporarily inactive category, or status 7, on the transplant waiting list (Hansen, 2014a). Patients and families often believe that the patients are off the list and find themselves in emotional turmoil with high anxiety and stress. The transplant waiting list becomes equal to life itself, although being listed on the waiting list is no guarantee for receiving a transplant.

The University Medical Center

I had no idea how essential, informative, and beneficial it would be for me to be involved in committees at the University Medical Center as well as taking the opportunity to teach with nurses and physicians. When I received an invitation to be a member of the Nursing Research Council, I jumped at it. My interactions and collaborations with healthcare professionals at the Medical Center enabled me to familiarize myself with its culture and environment. In 2009, I received the honor of being awarded the Research Champion Nurse of the Year and later the Distinguished Faculty Award in Recognition of Outstanding Collaboration.

Several nurses in the ICUs were interested in improving end-of-life care and palliative care referrals in the units. They joined together and formed the Palliative Care Research Group of which I became a member. We decided to study ICUs nurses' perceptions of their knowledge level and skills related to end of life care and how they found caring for patients and families pre- and post- implementation of a nurse-developed bereavement program for patients' families, use of a palliative medicine and comfort care team, preprinted orders for the withdrawal of life-sustaining treatment, hiring of a mental health clinical nurse specialist, and staff education in end-of-life care. The nurses' perceptions showed improvement; some improvements occurred over time differently in the ICUs; other improvements occurred uniformly (Hansen, 2009).

From OHSU to the Portland VA Health Care System

At the time of the "End-Stage Liver Disease and Treatment Decisions" study development, I was contacted by Dr. Anna Sasaki, a hepatologist. She thought that what I was studying in the ICU was good <u>but</u> that I needed to situate the study within the liver clinic setting instead. With her support and others, we were funded to conduct two separate prospective longitudinal studies. The first study examined pain and distress experienced by patients with ESLD without HCC (R03 NR010614). Findings from this study showed that there were two trajectories of pain, a high and a low level of pain severity. Pain at its worst was rated as severe and excruciating and pain at its least as mild and moderate (Hansen, 2014b). These findings are in line with findings from the SUPPORT study, that patients with liver failure experience moderate to severe pain. Also, we found that patients' pain was undertreated, and they reported lack of energy, pain, difficulty sleeping, and feeling drowsy as the most frequent, severe, and distressing symptoms.

During the study, of the 20 patients included, two were referred to hospice, none of them to palliative care, and eight died. Building on findings from this study, we received funding for another study, “Symptoms and Quality of Life in Patients with Advanced Liver Cancer” (ACS, PEP-10-173-01-PCSM). Included in this study were interviews with patients with HCC and their caregivers individually to learn how they experienced living with HCC. Patients reported lack of energy, pain, difficulty sleeping, and itching as the most distressing symptoms. The interview data described how patients’ quality of life was affected by symptom experiences, treatment decisions, and unmet information needs. Caregivers reported a need for information as well as feeling unprepared for end-of-life care and uncertain about symptoms (Hansen, 2017). During the data collection, two patients were referred to hospice, none of them were referred to palliative care, and six died. Compared to other cancers, we learned how stigmatizing HCC is.

I had no idea of the importance of being present in the liver clinics to be a reminder for the healthcare providers to facilitate recruitment of study participant. I believe our research team’s presence in the clinics and establishing relationships with providers have contributed to successful recruitment of study participants in all my studies.

As the study with patients with ESLD was close to completion, I was fortunate to continue my passion to study palliative care in ICUs.

From OHSU to Kaiser Permanente Center for Health Care Research

I had no idea how to explain to Dr. Richard Mularski from the Kaiser Permanente Center for Health Care Research when he contacted me about a joint study that he should change his medical focused grant application into one that clearly represented nursing. I saw these changes as critical if we should have a chance for funding. After contemplating for a few days how best to go about this, I decided to be completely honest. He was very supportive of the major changes that needed to be made, and we worked closely together. We had the privilege to receive funding from the Robert Wood Johnson Foundation (RWJF) for the study “Nursing’s Specific Contributions to Quality Palliative Care within the Context of Interdisciplinary Intensive Care Practice” (66630). We developed and operationalized 14 process measures that assessed the quality of care delivered across established domains of palliative care. We assessed the quality of care for ICU patients from three perspectives: medical record reviews, family satisfaction reports, and nurse ratings from those providing care in the ICU. We included in our study 150 patients, 136 family members, and 135 nurses. Overall, patients received 53.1% of recommended palliative care. Families were generally satisfied with the care delivered but improving communication and decision-making, supporting family members, and caring for patients as a person were important targets to address (Mularski, 2016).

Next Step in Program of Research

In 2013 an intriguing report was published by the NINR, “Building Momentum: The Science of End-of-Life and Palliative Care. A Review of Research. Trends and Funding, 1997-2010” (NINR, 2013). Of 1,978 studies on end-of-life and palliative care only nine were on liver disease.

Based on the chronic lack of palliative care for patients in the ICU and out-patient clinics, I was compelled to apply for more funding and for a larger scale longitudinal study to be conducted in out-patient clinics.

I had no idea how much grant writing and number of grant application submissions I would need to accomplish before receiving funding to study liver disease again. This is despite very little being published on end-of-life and palliative care in patients with ESLD. After several attempts building on my prior work, including smaller internally funded studies and focusing specifically on symptom experiences and palliative care**,** my perseverance paid off. My research and interest in caregivers' health and well-being naturally led to a dyadic study. "Symptom Burden in End-Stage Liver Disease Patient-Caregiver Dyads" was funded (R01 NR016017). The goal of the study was to identify trajectories of change in physical and psychological symptom burden in both adult patients with ESLD and their caregivers. Data were collected at baseline and at 3, 6, 9, and 12 months from 240 patient-caregiver dyads. Several reports published from this study are addressing gaps in the scientific knowledge base on ESLD. We have found that patients on average experience eight to nine symptoms, making symptom management challenging for healthcare providers (Hansen, 2022). Also, contrary to common assumptions, patient reported symptom severity occurs independent of disease severity and their symptoms (sleep, pain, depression) are undertreated.

Furthermore, we have identified three distinct classes of co-occurring physical and psychological symptoms in patients with ESLD: mild, moderate, or severe symptoms. Psychological symptoms were just as important as physical symptoms, but in clinical practice the focus is often on patients' physical symptom experience and laboratory values. Our findings highlight the need for improved management by healthcare providers through enhanced awareness and attention to psychological symptoms and symptom classes. Based on our longitudinal data we discovered two symptom trajectories: one with very high and non-mitigated symptoms (*n*=62) and one with lower and improving symptoms (*n*=130). Of the 240 patients, 38 died and 39 received a liver transplantation over the 12-month data collection. There were 36 palliative care referrals and 32 hospice referrals.

Similar to patient experiences, caregivers also experienced distinct symptom classes. Based on findings from preliminary data from 154 caregivers for patients with ESLD, the well-being of caregivers specified by caregiver strain, depressive symptoms, sleep quality, and physical and mental quality of life is diminished (Hansen, 2024). There are three distinct classes of caregiver well-being that range from mildly to severely diminished. Furthermore, there are several specific factors that identify caregivers with significantly greater odds of worse self-reported well-being including younger age, worse relationship quality, and spousal vs. non-spousal relationships.

We published the first dyadic study on physical and mental quality of life in ESLD patient-caregiver dyads and found that quality of life was interdependent within dyads (Hansen, 2021). Both patients and caregivers experienced lower mental quality of life than population norms, which is similar to other illness and caregiving contexts. Also, patient refractory ascites was associated with worse physical quality of life for both patients and their caregivers, and high levels of illness uncertainty were associated with worse physical and mental quality of life for both members of the dyad.

Next Step in Knowledge Development:

We are in the process of examining longitudinal symptom experiences in ESLD patients-caregiver dyads. We are also looking at resources used or in need of by patients with ESLD and their caregivers as well as their relationship quality. Another area of interest is the exploration of sex- and gender-based differences in liver transplantation. Women are less likely than men to receive a transplantation.

Palliative Care, Education, Advocacy and Research in Liver Disease

My publications on patients with ESLD and HCC and their symptom experiences were some of the few on the topic earlier on. To my surprise I was contacted by a small group of hepatologists who invited me to be a part of their group focused on improving palliative care for patients with liver diseases through education, advocacy, and research. We meet monthly with a goal of facilitating change at a national and international level to care provided to patients with liver diseases and their caregivers. We are very active in presenting our work and have published a consensus paper on targets and study design for symptom-focused trials aimed at patients with cirrhosis (Patel, 2023), a paper on developing priorities for palliative care research in advanced liver disease (Patel, 2021), and one on burden, quality of life, and palliative care for family caregivers of individuals with advanced liver disease (Woodrell, 2021).

I had no idea that I would be the only nurse, an *N* of 1, to be invited to develop the practice guidance for patients with decompensated cirrhosis: AASLD Practice Guidance: Palliative Care and Symptom-Based Management in Decompensated Cirrhosis (Rogal, 2022). As an expert in caregiving, I was a consultant on the guide to liver cirrhosis for patients and care providers, a Canadian care website.

Symptom Science in Liver Disease and an *N* of 1

I had no idea that I as an *N* of 1 would be recognized for my contributions to science by showing the value of nursing research in an exclusive arena where medicine has been the primary science valued. As a nurse researcher I have been able to integrate nursing's holistic approach to research into the dominant world of medicine for which I feel privileged and proud. I have been able to accomplish this while following my passion for patients who are seriously ill and dying and their caregivers.

I have enjoyed the process from my initial introduction to death and dying in the nursing home. I hope that you also will create your own fulfilling research path. I encourage you to enjoy the process and not focus on the end goal because of all the valuable and enriching encounters with others you may experience on your journey. I would not change a thing and would do it all again.

Since starting my program of research, end-of-life and palliative care research reports on liver diseases continue to be lacking. We have much to do and are years behind in developing a scientific knowledgebase compared to cancer and heart failure research. The state of science in symptoms, caregiving, and palliative care in liver diseases is in its infancy. I hope that my research in these areas will serve as a foundation for this science as it evolves.

As you can tell, **"having no idea"** has been a way for me to remain open to learning, exploring, and becoming wiser. Having no idea has allowed me to ask questions about what I do not know and to seek more information and knowledge to grow a program of nursing research. It has prevented assumptions about workload and its many challenges from discouraging me from the amount of work ahead. It has permitted me to fulfill an amazing journey by having an unexpected program of research in a country that I had no idea that I would be living in for so long. Some of the questions that come from not having an idea may develop into research questions, and is this not what nursing research is all about ? To search for answers to what we do not know ?

Acknowledgment

I would like to take this opportunity to thank all members of my research teams for their excellent and hard work and never-ending support. Also, I would like to thank patients and

caregivers/families who have participated in the studies and healthcare professionals who have supported the studies and facilitated participant recruitment. I would not have been able to do the work and to have accomplished what I have in promoting nursing research in liver disease if it had not been for you.

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The Carol A. Lindeman Award for a New Researcher Paper

NURSE REACTIONS TO WORKPLACE VIOLENCE: REPORTING AND SAFETY IMPLICATIONS

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Background

Workplace violence against healthcare employees is a dire global problem that has risen in frequency during the past decade and further escalated during the recent pandemic (Byon et al., 2022). The most common type of workplace violence in healthcare includes aggressive patient and visitor behaviors directed toward their caregivers (Chazel et al., 2023). The physical and psychological harms from workplace violence impact nurses' quality of life, contributing to patient consequences through nurses' decreased productivity and job satisfaction, clinical errors, higher absences, and attrition (Ramzi et al., 2022).

One contributing factor to workplace violence in nursing is that victims often do not report being victimized to their healthcare organization, law enforcement, or through other means (Findorff et al., 2005), with only 20% to 60% of nurses reporting these events (American Nurses Association, 2019). Underreporting perpetuates workplace violence by hindering the accuracy and quality of data available for researchers, healthcare institutions, and clinicians, leading to inadequate or ineffective mitigation measures (Byon et al., 2022).

Limitations exist in current research when exploring why nurses underreport workplace violence. For example, studies inconsistently define aggressive behaviors while employing descriptive methods marred by recall bias (Christensen & Wilson, 2022). Studies exploring nurse reporting of workplace violence have rarely used experimental vignette designs to mitigate these methodological concerns, and no known studies have used vignettes in a video format to study nurse reporting. Accordingly, to determine the factors of these behaviors, it is essential to use novel experimental approaches to expand on why nurses choose to report or not report workplace violence. Without empirically verified findings, current knowledge about the features of nurse reporting remains limited.

Design, Aims, and Hypotheses

Our study aimed to build knowledge of nurses' reactions to workplace violence by identifying which acts they believed were aggressive and reportable, and what factors prompted their reporting decisions. We conducted a sequential mixed-methods study, first qualitatively developing video vignettes to portray realistic workplace violence scenarios and then experimentally using these videos to examine nurses' responses to these depictions.

In the first study sequence, we aimed to use evidence-based practice to create and test video vignettes portraying realistic workplace violence scenarios. For the second sequence, we aimed to identify nurses' understanding of aggressive events prompting emotional reactions, including examining how patient, nurse, and event characteristics might influence the victim's likelihood to report these events. We used Affective Events Theory (Weiss & Cropanzano, 1996) to develop conceptual models and these hypotheses:

- One: The types of patient aggression represented in video vignettes are associated with increased affective reactions.
- Two: The level of aggression depicted in a video vignette has an effect on nurses' likelihood to report.
- Three: Prior encounters with workplace violence moderate the interaction between video depictions of aggression and nurse likelihood to report.
- Four: Nurses' beliefs about the severity of harm received from a patient aggression incident partially mediate the interaction between video depictions of patient aggression and nurse reporting likelihood.
- Five: Nurses' beliefs about the patient's intent to harm partially mediate the interaction between aggression video portrayals and nurse reporting likelihood.

Methods

Sequence One

Settings and Recruitment

Upon Institutional Review Board approval, we recruited from and conducted our study at a Mountain West academic medical center, including five hospitals and an affiliated College of Nursing, filming video vignettes at the College's simulation center. We recruited a purposive sample of nurses for two research panels (five members each), all with clinical experience working with and overseeing nurses who encounter workplace violence.

Vignette Creation and Production

We used evidence-based practice recommendations when creating vignette scripts and videos (Bradbury-Jones et al., 2014; Evans et al. 2015; Hillen et al., 2013; Skilling & Stylianides, 2019). We held and transcribed a focus group gathering panel one's experiences with aggressive patient behaviors. We analyzed and coded the texts using the Modified Overt Aggression Scale (Kay et al., 1988) as a template for motif domains and codes. Panel one reviewed these codes and used them for vignette development. Panel Two then reviewed the five scripts to make suggestions for added realism. We then gave their input to panel one, who worked in consensus to use this feedback and finalize the scripts. We used best-practice strategies to produce the vignettes into videos, including strategic actor casting, sets, props, camera perspectives, and post-production editing.

Sequence Two

Settings and Recruitment

We used nonproportional quota sampling to recruit nurses from similar inpatient adult acute care settings within three facility hospitals, with 686 potential research survey nurse participants. We considered the results of our power analysis and recommendations from Hillen et al. (2013) when setting a recruiting target of at least 172 nurses.

Research Survey Instrument

The survey included a consent cover letter, demographics, and questions that gathered responses to video vignettes, including Mitchell & Hastings's (1998) Emotional Responses to Challenging Behaviour scale to measure mean reactions of depression, anger, fear, and anxiety in response to vignette presentations. Survey questions also measured participants' likelihood to report a depicted incident and the reasons for or against their reporting. The survey displayed a video vignette and asked about participants' emotional responses and reporting behaviors related to the scenario. This process was repeated by displaying another vignette and asking the same repeated measures questions (each vignette demonstrating progressively aggressive patient behaviors). We minimized order effects using the survey platform to display each vignette and its associated follow-up questions randomly.

Data Collection and Analysis

Research activities involving participants took place from June – December 2022. The analyses included descriptive statistics and repeated measures ANOVAs/regression models, using IBM SPSS Statistics 29.0.0.0 (241) and R Studio 2022.12.0 Build 353.

Results

Sequence One Results

Participation Rates and Demographic Features

Of the ten potential panelists invited to participate, all accepted the invitation. Panel one ($n = 5$) and panel two ($n = 5$) had similar demographic features, and most importantly, all had clinical experience in settings that featured patient-on-nurse workplace violence.

Completed Video Vignettes

We rigorously developed scripts and produced them into five brief videos featuring authentic portrayals of workplace violence. The vignette introduction outlined that video segments displayed a fictional scenario between a hospitalized patient and a nurse, that participants should contemplate how they would feel and respond if they were the vignette nurse, and that additional videos would show the same interaction with alternate endings. The base segment depicted a patient requesting to smoke and the nurse telling the patient that smoking was not allowed. The closing segment showed different ways the patient could respond to being told 'no,' with the intensity of aggressive patient displays increasing with each successive video, ranging from mild verbal aggression by the patient to escalating physical aggression (Figure 1).

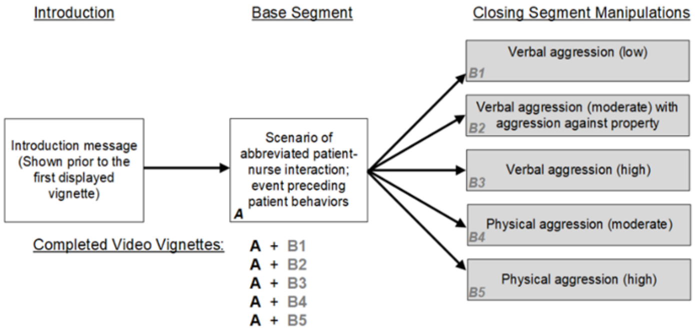

Figure 1. An Outline of Five Differing Video Vignette Scenarios

Sequence Two Results

Participation Rates and Demographic Features

We had a response rate of 44.9% (308/686) and selected 282 participants who completed all or most of the survey as our sample, reflecting a 41.1% (282/686) completion rate. Survey participants tended to identify as female, white or Caucasian, non-Hispanic or Latino/Latina, with a mean age of 35 (10.6).

Emotions Scale Results

The Emotional Responses to Challenging Behaviour scale demonstrated high reliability, with Cronbach's alpha coefficient values ranging from 0.798 – 0.929. The mean composite (15 items) values for videos one through five were: 23.31 (8.09), 25.87 (9.22), 28.17 (9.98), 30.14 (9.97), and 31.13 (10.49), suggesting participants gave higher ranks for their negative emotional reactions as the level of displayed aggression increased.

Descriptive Statistics

Participants indicated 80.6% - 92.1% of the time that given vignettes realistically portrayed workplace violence. As the level of aggressive displays increased, so did the percentage of respondents who thought the patient behaved intentionally and that the nurse received harm. Participants commonly indicated they would report a vignette scenario to promote safety, document, facilitate follow-up or change, and address intentional or severe behaviors. They most frequently suggested not reporting when believing the behavior was minor, part of the job, unimportant, or that reporting does not lead to follow-up or change.

Inferential Statistics

The repeated measures ANOVA comparing the effect of vignette portrayals of patient aggression (five groups) on the Emotions scale score showed mean scale scores differing with statistical significance (alpha = 0.05) across the five vignettes (F(3.786, 1011) = 3.885, p = 0.005). As the level of aggression displayed in the vignette increased, the Emotions scale marginal mean scores increased significantly with each successive vignette.

We fit a multilevel (nested) logistic model with repeated measures to predict the outcome of reporting with the vignette display of aggression (five groups), perceived frequency of exposure to a given displayed vignette, and the moderating effect of frequency on the vignette display influencing likelihood to report. While the moderation pathway result was inconclusive, our model showed a statistically significant main effect for the video display of aggression positively influencing participants' likelihood to report. Participants had 1.45 [1.02, 1.89] higher odds of reporting as the aggression displayed in a video increased.

We performed mediation analyses using the survey participants' (*n* = 282) 1382 repeated measures observations to assess the indirect effect of harm level (mediator) on aggression level (predictor) and reporting likelihood (outcome). We also analyzed the participants' perception of whether the patient was intentionally harmful as a mediator. The proportion of the total effect of aggression level on reporting likelihood mediated by harm level was 0.454 [0.375, 0.550], with 45% of the effect mediated through harm level. In other words, if the nurse's reporting likelihood increases because of high aggression levels, this relationship may be influenced by their perception of how much harm the nurse received.

The results did not support patient intent as mediating the relationship between aggression level and reporting likelihood (0.022 [0.012, 0.040]). However, when the level of aggression increased from one vignette to the next, participants had 1.74 [1.51, 2.02] higher odds of saying the patient was intentional and 1.36 [1.17, 1.55] higher odds of reporting, which may suggest nurse beliefs about patient's intent to harm directly influence their likelihood to report, reporting more often when perceiving intentional patient behavior.

Discussion

Vignette Realism

Our participants suggested the vignette portrayals of workplace violence were realistic and promoted emotional reactions, which helps to validate our unique use of this method to explore nurse responses and reporting of workplace violence. Prior evidence suggests the effectiveness of vignette presentations in eliciting psychophysiological responses (Visser et al., 2018). Our findings expand on literature trends by experimentally corroborating the negative emotions nurses might experience when victimized during workplace violence events. It is crucial to understand this emotional impact because it can contribute to long-term psychological consequences among healthcare workers (Shi et al., 2020).

Factors Influencing Likelihood to Report

Level of Aggression and Harm

Our findings suggested the level of aggression displayed in a vignette positively influenced the participant's reporting likelihood, with their interpretation of the severity of harm partially mediating this relationship. This novel finding comes with face validity, as it seems logical that a high level of patient aggression (predictor) would lead to a nurse perceiving being harmed (mediator) and, in turn, more likely to report (outcome). This result builds experimentally on recent descriptive findings suggesting more frequent reporting of physically aggressive episodes than less aggressive events (Song et al., 2021), with underreporting when perceiving events as non-serious (Byon et al., 2020).

Event Frequency

Our findings were unique in experimentally suggesting the negative relationship between participants' perception of their frequency of exposure to patient aggression events and their likelihood to report. Nurses experiencing infrequent workplace violence may have heightened stress responses to uncommon events (Havaei et al., 2020), making them more likely to report. Conversely, nurses facing frequent workplace violence may normalize it as these events become routine (May et al., 2009).

Intentionality

As the level of aggression increased, nurses were more likely to perceive the patient as being intentional, with participants commonly citing intention as a reason for reporting. These results experimentally build on recent descriptive findings indicating nurses underreport when perceiving patients as unintentional in their actions (Song et al., 2021). Nurses may have a higher tolerance for unintended behaviors, perceiving events less egregiously when rationalizing the patient's behavior as inadvertent (Zhang et al., 2021).

Limitations

Participants responded to portrayals of workplace violence, not actual events. Given our inpatient sample represents one geographic location in the United States, it may not apply to all nursing settings, and the large sample size may have partially contributed to the results' statistical significance.

Conclusions and Recommendations

Workplace violence against nurses is a prevalent global problem with severe consequences. Our novel research suggested that the nursing victims of workplace violence experience negative emotional responses while sometimes paradoxically normalizing and rationalizing adverse patient behaviors. We identified key factors influencing nurses' decisions to report workplace violence: the patient's aggression level, the level of harm received by the nurse, whether the nurse felt the patient's actions were intentional, and the perceived frequency at which nurses encounter these events. These findings inform future research and may promote international clinical practices to enable nurse reporting for improved workplace safety. Healthcare institutions can enact policies that encourage nurses to report any form of aggression they encounter, not just blatantly harmful events, and can assess the challenges within their facilities to implement targeted interventions for staff and patient safety.

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The Carol A. Lindeman Award for a New Researcher Paper

CHANGES IN MATERNAL GUT METABOLITES
AND ASSOCIATIONS WITH POSTPARTUM DEPRESSION

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Introduction

Mental health conditions are the leading underlying cause of maternal death, with 80% of deaths considered preventable [1]. Evidence of fetal programming and developmental delays in the offspring demonstrate the effects of maternal mental health extend beyond the perinatal person [2]. Depression, impacting at least one in seven perinatal persons, is one of the most common medical complications perinatally [1–3]. Yet, its pathophysiology remains poorly understood, resulting in at least half of all perinatal depression cases going undiagnosed and untreated [4].

Though the FDA recently approved the first oral postpartum depression (PPD) treatment (Zuranolone), selective serotonin reuptake inhibitors (SSRIs) have traditionally been the first line of treatment in perinatal depression, supporting the involvement of serotonin in PPD pathophysiology [3, 5, 6]. Allopregnanolone, a metabolite of the sex hormone progesterone, is a neuroactive steroid. Zuranolone is a synthetic form of allopregnanolone that acts as a positive allosteric modulator of the gamma-aminobutyric acid type A ($GABA_{A)}$ receptor and is the first oral PPD treatment [3, 6]. The Zuranolone clinical trials indicate perturbations in sex hormones (i.e., progesterone, allopregnanolone) and GABA activity likely play a significant role in PPD. Further, the rapid symptom improvements observed in postpartum individuals during Zuranolone clinical trials were not present in trials for major depression in non-postpartum individuals[3, 5, 6], suggesting biological contributors to PPD may differ from that of major depression.

Advancements in microbiome research led to the discovery of bidirectional signaling between the gut and central nervous systems, known as the gut-brain axis (GBA) [7]. This axis has garnered attention in disease development, particularly neurological disorders such as depression. Sex hormones, like progesterone, play a vital role in supporting pregnancy, lactation, postpartum recovery and the return of the menstrual cycle [5–8]. Emerging evidence suggests gut microbiota can modulate the GBA (e.g., peripheral and central steroid hormone levels) [7]. However, interactions among gut microbiota and components of the GBA have been minimally explored in perinatal populations despite independently exhibiting great promise for advancements in understanding of PPD pathophysiology and psychopharmacological treatment response.

To our knowledge, the present pilot study is the first to use metabolomics analysis on maternal fecal samples to explore temporal changes in gut neurotransmitters commonly implicated in mood disorders (GABA, serotonin, dopamine) and associations with PPD. By using this novel approach, this study contributes to the discovery of PPD biomarkers and provides preliminary evidence for future investigations on the microbiota-gut-brain axis. Advancements in understanding of this axis and its role in PPD may lead to timely breakthroughs in objective measures for detecting PPD risk in pregnancy. Such advancements could further be utilized to identify subtypes of PPD, informing targeted interventions to address maternal mortality and morbidity rates and indirectly promoting fetal health.

Methods

Participants

Data were obtained from a prospective cohort study following mother-child dyads from pregnancy to two years postpartum (NCT04132310). Participants were recruited during pregnancy (<16 weeks' gestation) from the Central Texas region. A subset of participants were included who were enrolled between August 2019 – June 2022 with complete behavioral and biological datasets (n = 25) at three time points (i.e., 24- and 35-weeks gestation, 6 weeks postpartum). Additional samples from this cohort are to be analyzed at a later date, allowing for further exploration of metabolite changes and relationships among metabolite activity and the gut microbiome.

Psychometric measures

A demographic self-report questionnaire was administered to collect information on various sample characteristics. Depression was measured by the Edinburgh Postnatal Depression Scale (EPDS) at 6 weeks postpartum using scores as a continuous variable. The EPDS is a widely used 10-item self-report measure and is currently considered the "gold standard" for measuring postpartum depression [8]. The questionnaire is designed to measure feelings of depression over the last 7 days with varying sensitivity (59-100%) and specificity (49-100%) [8–10]. Scores range from 0-30 with higher scores indicating greater severity.

Biological measures

Fecal samples were self-collected at 24- and 35-weeks gestation and 6 weeks postpartum. Specimens were delivered to the lab on-campus at the University and stored in a -80°C freezer until sample processing for untargeted metabolomic analysis occurred in June 2022. The metabolites examined in the present study are GABA, serotonin, and dopamine.

Metabolomic and statistical analysis

Laboratory identification of metabolites and preliminary analyses were performed at Metabolon Inc. (Research Triangle Park, NC, USA). Metabolites were identified using Ultrahigh Performance Liquid Chromatography-Tandem Mass Spectroscopy (UPLC-MS/MS). Metabolite data were log transformed and False Discovery Rate (p-adjusted <0.05) was used to account for multiple comparisons. Fold change analysis and Pearson's correlation were used to examine temporal changes in individual metabolites and associations among changes in pregnancy and PPD scores. All steps for sample preparation, QA/QC, and metabolomic and preliminary analysis performed by Metabolon, Inc. can be provided in a **Supplementary Table**.

Results

Participants were primarily Non-Hispanic (76%) White (80%) women with a mean (SD) age of 33.5 (4.3) years. An EPDS score of ≥ 10 [11] classified 24% of the sample as likely experiencing postpartum depression, aligning with incidence rates commonly observed in the perinatal population. Additional details on sample characteristics can be found in **Table 1**.

Temporal changes and associations with postpartum depression

When reporting fold change, values are reported in the following order: 35- and 24-weeks pregnancy [35, 24]; 6 weeks postpartum and 24-weeks pregnancy [6, 24]; 6 weeks postpartum and 35-weeks pregnancy [6, 35]. All findings are visualized in **Fig. 1**.

Even after correcting for multiple comparisons, GABA levels at 6 weeks postpartum were significantly lower than levels found at both 24- weeks and 35- weeks gestation (fold change [35, 24] = 1.95, p = 0.45; fold change [6, 24] = 0.57, p = 0.01; fold change [6. 35] = 0.29, p < 0.001). Changes in GABA during pregnancy demonstrated the strongest association with PPD scores (*r* = -0.2463, p = 0.2353); however, the association was small and non-significant. Serotonin (fold change [35, 24] = 0.88, p = 0.1448; fold change [6, 24] = 1.10, p = 0.4850; fold change [6, 35] = 1.25, p = 0.6315) and dopamine (fold change [35, 24] = 0.75, p = 0.4652; fold change [6, 24] = 1.21, p = 0.6460; fold change [6, 35] = 1.62, p = 0.1823) levels increased over the perinatal period, though also not significant. Negative associations between

PPD scores and pregnancy changes in serotonin (r = -0.1056, p = 0.4256) and dopamine (r = -0.03, p = 0.87) were small and non-significant.

Discussion

Despite sample size limitations, our findings indicate GABA levels increase in pregnancy but significantly decrease from pregnancy to postpartum. Existing evidence suggests low GABA levels are associated with depression, but this evidence has largely been limited to plasma levels in non-perinatal samples [13–15]. In the few studies with perinatal samples, the rapid downregulation of GABA postpartum, as seen in the present study, is thought to be problematic when GABA is unable to restore to basal levels [13]. Causative factors that impede the restoration of GABA to basal levels are not well understood; however, the Zuranolone clinical trials indicates neurosteriods as a promising mechanism for future investigations [5, 6, 13]. Further, though the changes we observed in serotonin and dopamine were not significant, changes in both metabolites contrasted that of the significant changes observed in GABA levels from pregnancy to postpartum. Our findings also suggest negative associations among pregnancy changes in neurotransmitters and PPD scores which is consistent with existing evidence [13], but largely limited to plasma levels in non-perinatal samples. Thus, the present findings contribute to PPD literature by providing additional support for GABAs potential role in PPD pathophysiology, and provides new insights that can inform future investigations on perinatal metabolite activity and relationships with PPD.

Collectively, these findings support perinatal depression as a multifaceted condition, suggesting potential involvement of a biochemical network in its pathophysiology. Consequently, employing a biochemical panel in future investigations may provide a more comprehensive understanding of biological mechanisms underlying PPD pathophysiology, leading to the discovery of markers of PPD risk. Future investigations are needed to replicate these findings in larger samples and to clarify if the patterns observed in our study represent physiological characteristics of pregnancy and postpartum or depict biological markers of PPD risk. Further, since oral psychopharmacological treatments are the primary treatment for PPD and evidence suggests gut microbiota may modulate neural activity and sex hormone levels, future investigations should consider incorporating gut microbiota and sex hormones variables.

Public health implications

Federal and public health agencies recommend persons at-risk for PPD be referred to counseling services. However, screening for PPD is not universal and there are currently no standardized methods for identifying those at-risk of PPD which poses a challenge for healthcare providers who lack diagnostic expertise in perinatal psychiatric conditions but are most likely to interact with at-risk individuals.

Though preliminary, these findings are timely and warrant further investigation to advance understanding of biological pathways underlying PPD risk. Advancements in understanding of PPD pathophysiology could lead to the discovery of novel biomarkers of risk and potential subtypes of PPD, explaining heterogeneity in symptom presentations (e.g., anxiety, irritability, anhedonia, decreased motivation). Knowledge advancements of this nature could inform the development of individualized approaches for detection and intervention of maternal mental health disorders, reducing maternal mortality and morbidity and promoting fetal health. Since depression disproportionately impacts biologically born females and is a leading cause of global disability, these efforts can also contribute to reductions in economic burdens of disease.

Tables and Figures

Table 1. Description of sample characteristics

Characteristics	n	M (SD)	Percentage %
Age (years)	25	33.5 (4.3)	100%
Gestational age (visit – 24 wks)	25	24.8 (0.8)	100%
Gestational age (visit – 35 wks)	25	35.5 (1.2)	100%
Postpartum visit (days)	25	49.7 (17.1)	100%
Race and ethnicity			
White	21	---	84%
Asian	1	---	4%
Native American/Alaskan Indian & White	2	---	8%
Black/African American & White	1	---	4%
Hispanic	4	---	16%
Non-Hispanic	21	---	84%
Employment			
Employed	25	---	100%
Education			
≥ College graduate	24	---	96%
Partner status			
Married	23	---	92%
Annual family income			
≥ $100,000	6	---	68%
Health insurance			
Private	21	---	84%
Parity			
Nulliparous	14	---	56%
Postpartum depression			
EPDS	25	6.2 (4.9)	100%
*Probable postpartum depression	6	---	24%
Psychiatric history			
History of depression and/or anxiety	5	---	20%
Mode of delivery			
Vaginal	14	---	58%
Breastfeeding			
Yes	22	---	88%

*Edinburgh Postnatal Depression Scale (EPDS) cut-off score ≥10.

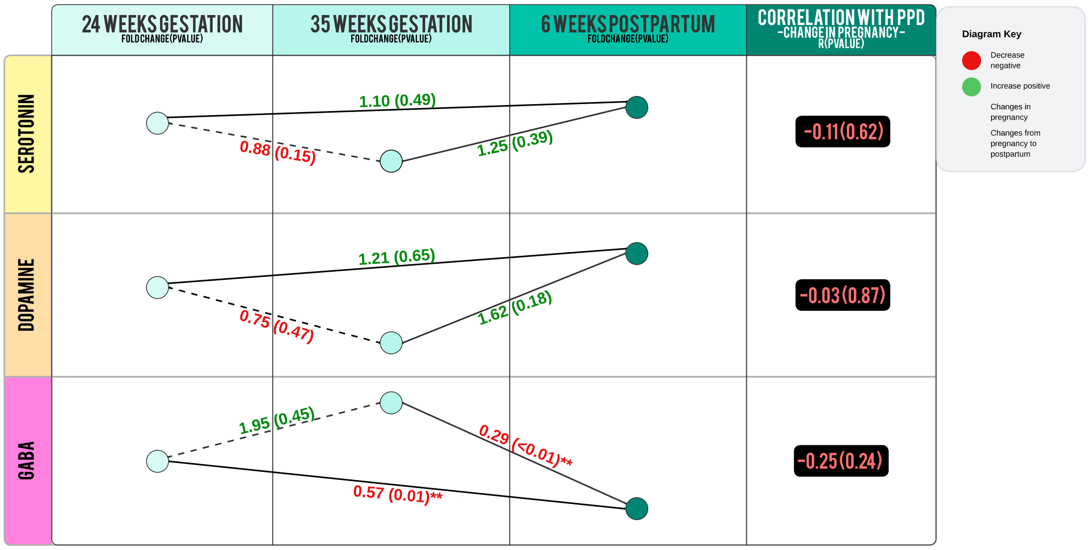

Fig 1. Overview of findings. Temporal changes in metabolite activity across timepoints and correlations between pregnancy changes and postpartum depression scores.

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[1] NINR/NIH (T32NR019035); Co-author Dr. Elizabeth Widen – NICHD/NIH (5R00HD086304-06); Co-author Dr. Michelle L. Wright - NINR/NIH (K01NR017903)

ABSTRACTS OF SYMPOSIUM PRESENTATIONS

A FRAMEWORK FOR RESEARCHING WOMEN’S HEALTH ACROSS THE LIFESPAN

Overview: A Framework for Researching Women’s Health across the Lifespan

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***Mary Roberts Davis**, PhD, RN, School of Nursing, Oregon Health & Science University, Portland, OR; **Quin E. Denfeld**, PhD, RN, School of Nursing, Oregon Health & Science University, Portland, OR; **Shirin O. Hiatt**, MPH, MS, RN, School of Nursing, Oregon Health & Science University, Portland, OR; **MinKyoung Song**, PhD, RN, FNP, FAHA, School of Nursing, Oregon Health & Science University, Portland, OR; **Lyndsey M. Miller**, PhD RN, School of Nursing, Oregon Health & Science University, Portland, OR; **Susan J. Rosenkranz**, MA, School of Nursing, Oregon Health & Science University, Portland, OR; **Ellen Tilden**, PhD, CNM, School of Nursing, Oregon Health & Science University, Portland, OR; **Deanne Tibbitts**, PhD, Knight Cardiovascular Institute, Oregon Health & Science University, Portland, OR*

Background & Purpose: Worldwide, there are known health inequities due to sex and/or gender. Merely living as a woman is a risk factor for poor health outcomes across the lifespan, with additional factors (e.g., racism, global warming) compounding these risks. Women navigate unique physical and social circumstances that collectively contribute to their overall health and wellbeing. Moreover, cultural, political, and economic factors can marginalize women and contribute to vulnerability in their health globally. Research aimed at addressing and eliminating sex/gender health disparities needs to consider internal (i.e., reproductive stage, chronologic age, gender identity), relational (i.e., social support, caregiving roles, partner status, gender roles), and external factors (environment, policy, social determinants of health) that affect a woman’s overall health and wellbeing. To date, theoretical frameworks for studying health with a focus on women are often limited to a few constructs and have noted challenges in quantifying the intersectionality of micro and macro-level factors with gender in health research. The purpose of this Symposium is to introduce a working framework that supports researchers and clinicians in considering the myriad of angles that impact the overall health and functioning of women across the lifespan.

Definition of Framework: Over three years, a multidisciplinary group of clinicians and researchers in the Women’s Health Throughout the Lifespan Research Interest Group (WHRIG) at Oregon Health & Science University School of Nursing met to develop a framework that encompasses the evidence base with the goal of improving and optimizing the health of women. The finalized framework consists of six constructs to examine health and wellbeing of women across the lifespan. External factors (i.e., reproductive healthcare access, global warming), Relational factors (i.e., caregiving status, partnered status), and Internal factors (i.e., reproductive stage, health conditions, internal stress) inform one another and are factors implicated in individual life engagement outcomes. Life Engagement constructs of Internal Factors, Relational Factors, and External Factors create a feedback loop and may respond to internal, relational, and external factors.

Linking Framework to Research: Symposium presenters will begin by presenting an overview of the framework and its constructs. Then, individual WHRIG members will present the working framework applied to their research area.

Symposium sessions will apply the Women’s Health Research Across the Lifespan (WHRL) Model to:

1. Understand Multimorbidity Challenges among Women
2. Understand Women’s Physical Activity for Cardiometabolic Health in Midlife
3. Understand Frailty among Women with Heart Failure
4. Understand Cardiovascular Health of Custodial Grandparents

Conclusion: By the end of this Symposium, attendees will have a working knowledge of the framework be able to discuss examples of research that utilizes this framework across the lifespan of women.

Applying the W.H.R.L. Model to Understand Multimorbidity Challenges Among Women

***Shirin O. Hiatt**, MPH, MS, RN, School of Nursing, Oregon Health & Science University, Portland, OR*

Background & Purpose: With the increase in life expectancy of the population worldwide, comes an increase in prevalence of chronic illnesses, particularly multimorbidity (MM), defined as the presence of ≥ 2 chronic conditions simultaneously. MM affects nearly 43% of the population in North America and has emerged as a significant public health problem globally with an estimated prevalence of 37%. Multiple studies have supported the higher MM prevalence among women than men; MM occurrence intensifies around the time of menopausal transitions. Women are also living longer and have longer life expectancy than men and the presence of MM is shown to be related to and result in diminished quality of life. Women assume many informal roles within their family and social network, in addition to formal roles such as employment, and are often caregivers for children, parents, grandparents, siblings and spouses. These assumed responsibilities impose burden and challenges in meeting their own health care needs and management of MM, or caring for someone with MM. The competing challenges women face not only affect their physical health but present psychological challenges and result in additional mental health comorbidities. Therefore, sex/gender differences in MM across adult life span is an important concept to explore given the differences in key characteristics between men and women. The purpose of this presentation, therefore, is to apply the Women's Health Research across the Lifespan (WHRL) Model to examine and understand determinants, challenges and impact of multimorbidity among women vs. men.

Description of Model and Concepts: The WHRL Model will be used to understand how MM as an internal factor intersects with other internal, external and relational factors. Using this model, we will also be able to understand the differential effect of MM on life engagement outcomes and well-being and ultimately characterize the phenotypes of MM experience among women vs. men.

Logic Linking Model to Research: The gender differences are associated with biological, environmental, socioeconomical, and cultural factors but our understanding of these factors in relation to MM across adult life span, specifically among women, is limited. MM intersects with many elements in the model, such as social determinants of health comprising elements of both internal and external factors, and is associated with decreased quality of life. Disparities in access to health care and cultural factors may also impact women with MM and/or their female care partners. MM is also associated with frailty as the accumulation of chronic illnesses may further increase the risk of diminished functional life engagement.

Conclusions: Understanding the impact of multimorbidity on women as patients and/or care partners of patients with MM will inform future directions for research on women's health as an NIH priority. The WHRL Model is appropriate for understanding MM experience and examining the myriad of challenges it presents among women as patients and care partners.

A FRAMEWORK FOR RESEARCHING WOMEN'S HEALTH ACROSS THE LIFESPAN

Understanding Women's Physical Activity for Cardiometabolic Health in Midlife

***Mary Roberts Davis**, PhD, RN, School of Nursing, Oregon Health & Science University, Portland, OR*

Background/Purpose: Across the life-course, menopause is a change associated with the reproductive system can impact cardiac health in women. The average age of menopause is 51 years, yet the menopause transition lasts, on average, from 4-10 years. The menopause transition, defined as the period of physiologic changes that occur prior to the final menstrual, has been connected with symptoms that disrupt daily function. Moreover, the menopause transition has been shown to be associated with both short- and long-term health outcomes and is receiving increased attention from some professional organizations as a unique life stage for intervention to prevent cardiovascular disease (CVD). Short term, women traversing the menopause transition report increased depressive symptoms and sleep disturbance. Long-term, the menopause transition is significantly associated measures of cardiometabolic health - including increased adiposity, hyperlipidemia, and hypertension. <u>The purpose of this presentation</u> is to apply the Women's Health Research Across the Lifespan (WHRL) Model to the research question: What factors influence women's physical activity as a cardiometabolic health behavior in midlife?

Description of Model and Concepts: CVD risk is traditionally assessed by 8 modifiable risk factors: blood pressure, glucose, cholesterol, body weight, sleep, physical activity, smoking, and diet. Minutes of physical activity each week is a cardiometabolic health behavior that can reduce CVD risk. The WHRL Model can be used to understand how women in midlife assess their individual CVD risk and what amount of physical activity they engage in to mitigate this risk. During the menopause transition, External, Relational, and Internal factors interact to impact constructs of Life Engagement in the form of physical activity related to cardiometabolic health.

Linking Model to Research: When researching physical activity behavior related to cardiometabolic health among midlife women, it is essential to consider various factors that may impact behaviors. Assigning these behaviors and factors to constructs within the WHRL model ensures that many levels are considered. The primary outcome of physical (i.e., minutes/week of moderate to vigorous physical activity) aligns with the Behavioral Life Engagement construct. The actual amount of physically active time may be predicted by 1) Internal Factors such as comorbid conditions (i.e., arthritis, asthma, depression) or menopause symptoms (i.e., sleep disturbance, vasomotor symptoms), 2) Relational Factors such as parenting responsibilities, understanding of CVD risk or menopause care, and 3) External Factors including access to menopause specialists, safe environment to engage in physical activity, or social determinants of health. What a woman can actually do physically (e.g., ability to engage in a desired physical activity) – or Functional Life Engagement – may mediate the effect that Internal, Relational, or External factors have on number of physically active minutes/week.

Conclusion: The WHRL Model is appropriate for examining cardiometabolic health behaviors among women traversing the menopause transition by including a multitude of factors that may these behaviors. This model provides a holistic approach to identifying individual and system factors that impact women's midlife health. Using this model for research may lead to intervention points for improving cardiometabolic health during and beyond the menopause transition.

Funding: This work was funded by Oregon Building Interdisciplinary Research Careers in Women's Health K12 Program funded by the Office of Research on Women's Health and the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the NIH (8K12AR084221).

Applying the WHRL Model to Understand Frailty Among Women with Heart Failure

Quin E. Denfeld*, PhD, RN, School of Nursing, Oregon Health & Science University, Portland, OR;* ***Deanne Tibbitts****, PhD, MCR, Knight Population Science, Oregon Health & Science University, Portland, OR*

Background and Purpose: The male-female health-survival paradox is a phenomenon that describes how women tend to live longer lives but have worse health than men. One of the manifestations of worse health is frailty, which is characterized as physiological decline across multiple systems and increased vulnerability to stressors. It is becoming increasingly evident that women are more frail than men in both normal aging and disease states. For example, heart failure is one such disease state that exhibits disproportionately higher rates of physical frailty among women than men. However, it is unclear why women are more frail than men. The mechanisms underlying frailty may be related to sex and gender differences as evidenced by differences in biomarkers of frailty, intramuscular changes associated with weakness, and the combination of physical and psychosocial factors. Even sex-specific factors, such as the reproductive life course, have been hypothesized to be associated with frailty among women. The purpose of this presentation is to apply the Women’s Health Research Across the Lifespan (WHRL) Model to the research question: “What are the internal, relational, and external factors associated with frailty among women with heart failure?”

Description of Model and Concepts: The WHRL Model will be used to understand how frailty arises in women with heart failure. Frailty can be viewed as a combination of both functional life engagement and behavioral life engagement. From conceptual and operational perspectives, the frailty phenotype often includes criteria of unintentional weight loss, weakness, slowness, physical exhaustion, and low physical activity.

Logic Linking Model to Research: The frailty criteria capture both what people can do (e.g. walking and rising up out of a chair) and what they are doing (e.g. eating and physical activity). These factors, in turn, are influenced by decisional life engagement (i.e. what they want to do, must do, or desire to do). For example, if women must stay home and care for a family member, this could impact their functional abilities (e.g. diminish their strength and cognitive functions) and their behaviors (e.g. shopping for healthy foods, monitoring and managing their heart failure symptoms). The internal factors could include any of the systems biology approaches (e.g. epigenetics, transcriptomics, proteomics), the reproductive history (e.g. numbers of pregnancies, menopause), and the effects of chronic conditions (e.g. inflammation from cardiovascular disease and/or autoimmune disease). The relational factors could include gendered roles (especially caregiving), loneliness, social isolation, and social support. The external factors could include accessing healthcare and stigma associated with healthcare (e.g. women access healthcare more, which may result in frailty being identified more often). Importantly, this model can be viewed from the life course perspective in which events across a person’s lifetime all contribute to the eventual manifestation of the frailty phenotype (e.g. adverse childhood events, generational cohort effects).

Conclusions: The WHRL Model appears appropriate for examining frailty among women with heart failure as it encompasses the outcome (frailty) from both a functional and behavioral perspective, and it employs various levels of interacting factors that may influence the manifestation of frailty.

Funding: The research reported in this paper was supported by the Oregon Building Interdisciplinary Research Careers in Women’s Health K12 Program funded by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the NIH under Award Number K12HD043488 and the Oregon Health & Science University Research Interest Group Grant.

Applying the WHRL Model to Understand Cardiovascular Health of Custodial Grandparents

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Background and Purpose: As of 2021, an estimated 2.3 million U.S. grandparents were primary caregivers for their grandchildren because their grandchildren's parents lost custody for a variety of reasons (e.g., domestic violence, incarceration). The number of custodial grandparents has surged in recent years, with existing trends exacerbated by parental deaths during the COVID-19 pandemic and the effects of the opioid crisis. The majority (~90%) of custodial grandparents are women. Further, a recent systematic review documented decreased health/well-being among grandparent primary caregivers, higher rates of cardiovascular disease (CVD), depression, and health decline when compared to their non-caregiver peers. The purpose of this presentation is to apply the Women's Health Research Across the Lifespan (WHRL) Model to the research question: "What are the internal, relational, external factors that influence cardiovascular health among grandparent primary caregivers (custodial grandparents)?"

Description of Model and Concepts: The WHRL Model will be used to describe factors influencing cardiovascular health of custodial grandparents. Cardiovascular health encompasses measures for behavioral life engagement (e.g., diet, physical activity) as well as physiological indicators (e.g., body mass index, blood lipids).

Logic Linking Model to Research: Factors influencing the cardiovascular health of custodial grandparents can be identified in each of the WHRL Model levels: internal, relational, and external. *Internal-level* factors included: demographics (age, race/ethnicity, education level, marital status), history of adverse childhood experiences (ACEs), and physical health status (e.g., comorbidities). *Relational-level* factors included: caregiving burden, presence (or lack) of family or social support, and quality of grandparent-child relationship. *External-level* factors included: access to healthcare services, perceived neighborhood environment, both in terms of support and safety, and other social determinants of health (e.g., poverty).

Conclusions: The WHRL Model appears appropriate for addressing cardiovascular health and CVD risk reduction in custodial grandparents as it requires a multi-factorial approach that integrates unique and common factors at internal, relational, and external levels. Such understanding can inform how to modify existing CVD interventions or design new tailored interventions that address the complex cluster of needs in this population. Taking action to address CVD risk in this population can play a pivotal in helping to mitigate CVD risk in grandfamilies, through supporting healthy aging and reducing CVD risk for grandchildren in these families over their life course.

Funding: The research reported in this paper was supported by the Oregon Health & Science University Research Interest Group Grant.

Overview: Characterizing the Phenotype of Postpartum Depression

Sandra J. Weiss*, PhD, DNSc, FAAN, Community Health Systems, University of California, San Francisco, CA*

Postpartum depression (PPD) occurs in approximately 15% of women, although the risk for PPD can rise to 40% among women with elevated stress in their lives. PPD is a source of significant emotional suffering and a major risk factor for suicide. It has also been associated with problematic maternal behavior that can adversely affect infant development and psychological well-being. In the past, PPD was viewed as a disorder that occurred during the first month after birth of an infant. However, a growing number of studies suggest that PPD symptoms may persist across the first year postpartum. Despite the prevalence of PPD and its potential for persistent, deleterious effects on women and children, there is no consensus about the specific phenotype constituting postpartum depression nor whether it changes over the 12 months after birth. Experts in the field have noted that PPD may have its own phenotype, distinct from other depressions experienced by women or the population as a whole.

The objectives of this symposium are to: 1) describe the importance of a clearly defined phenotype to assessment and treatment of PPD as well as to the validity of ongoing research, 2) discuss the potential role of specific neuroendocrine and metabolic markers in better understanding the PPD phenotype, and 3) identify factors in the social environment that may help define the PPD phenotype, including infant characteristics, stressful life events, discrimination, and social support. As a foundation for our research presentations, we will describe conceptualizations of a phenotype, the phenome, and phenotypic domains, along with their implications for understanding PPD and other health problems. Our first two research presentations will examine potential biological markers that may elucidate PPD and help to differentiate it from other forms of psychological distress. The next two presentations address the role of social determinants in PPD, identifying environmental characteristics shared by women that may contribute to the phenotype. In our final presentation, we will discuss the persistence of PPD over the first year postpartum and how changes in depression across time may be influenced differentially by biological and social factors. The five research studies in our symposium involve laboratory, clinical and community-based approaches and employ various measures of PPD. Non-invasive approaches for measuring various cortisol metrics and neurotransmitter metabolites will be described as well as behavioral coding and survey methodologies to assess social determinants associated with PPD.

Currently, many women with PPD are not receiving appropriate care due to the lack of knowledge regarding unique characteristics that comprise the PPD phenotype. If the phenotype continues to be ill-defined, there will be diminished ability to assess and target signature symptoms, or to develop nursing interventions that can modify social risk factors or rectify biological alterations underlying the condition. The purpose of this symposium is to contribute knowledge about the phenotype that can advance these goals and the nursing care of women who experience postpartum depression.

Funding: Robert and Delphine Wentland Eschbach Endowment

CHARACTERIZING THE PHENOTYPE OF POSTPARTUM DEPRESSION

Temporal Changes in Maternal Metabolites and Associations with Postpartum Depression

***Kayla Longoria**, PhD, MA, RN, Physiological Nursing, University of California, San Francisco, Austin, TX; **Michelle Wright**, PhD, RN, FAAN, National Institutes of Health, DC, WA; **Sarina Garcia**, University of California, San Francisco, CA; **Oscar Franco Rocha**, BSN, RN, University of Texas at Austin, Austin, TX; **Sara Dube**, MPH, CHES, Department of Nutritional Sciences, University of Texas at Austin, Austin, TX; **Elizabeth Widen**, PhD, RD, Department of Nutritional Sciences, University of Texas at Austin, Austin, TX*

Purpose: Maternal mental health conditions are a leading cause of maternal mortality, depression being one of the most common. Multiple federal agencies and professional organizations recommend universal screening and referral for postpartum depression. However, self-report measures often have limited sensitivity or specificity and no objective measures to determine risk status currently exist. Since biomarkers can serve as clinically efficient tools for determining risk status, we focused on potential biological mechanisms that may underlie postpartum depression (PPD). Like other forms of depression, PPD has been frequently associated with a neurotransmitter imbalance. In addition, preliminary evidence suggests that women with PPD may have alterations in neurotransmitter metabolism. The aim of this exploratory study was to examine temporal alterations in gut metabolites and their relationships with postpartum depression (PPD). Metabolites of interest involved neurotransmitters and their amino acid precursors.

Design: A subset of participants (n = 25) in an ongoing prospective cohort study in Central Texas were included. Maternal depression was measured using the Edinburgh Postnatal Depression Scale (EPDS). Metabolites were assayed from maternal fecal samples (N = 75) at three timepoints (24- and 35-weeks gestation, 6 weeks postpartum). Global metabolomics analysis was performed by Metabolon, Inc. We assessed seven metabolites using Principal component analysis, Fold change analysis, Pearson correlations, and Linear regression to investigate changes in individual gut metabolites from pregnancy through the postpartum and the relationship of these changes to PPD.

Results: There were observed differences in metabolic profiles of women who had a psychiatric history compared to those who did not. In addition, Gamma-aminobutyrate acid (GABA) significantly decreased from 24- and 35-weeks gestation to 6 weeks postpartum, respectively (fold change = 0.57, $p = 0.01$; fold change = 0.29, $p < 0.001$). Though not significant, temporal trends in serotonin and dopamine were also observed. Associations between specific metabolites and PPD were small and not significant, with GABA being the strongest ($r = -0.2463$, $p = 0.2353$). No regression models reached significance.

Conclusions: Our findings indicate a small effect size for the relationship among GABA levels and PPD, an association which was likely not significant due to our diminished power to detect significance in the small sample. Results also suggest that changes occur in GABA from pregnancy to the postpartum. Both these findings warrant further study of the GABA metabolite as a predictor of PPD and risk for its development. However, future research should consider a comprehensive set of variables in a larger sample to gain a more holistic understanding of the PPD phenotype and the relative importance of GABA's role.

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CHARACTERIZING THE PHENOTYPE OF POSTPARTUM DEPRESSION

Postpartum Depression Cortisol Profile Is Uniquely Different from Anxiety and Stress

***Ling Xu**, BS, RN, University of California, San Francisco, San Francisco, CA;* ***Sandra J. Weiss**, PhD, DNSc, FAAN, Community Health Systems, University of California, San Francisco, CA*

Background: Women are at high risk of depression during the first 6 months postpartum. Alterations in the hypothalamic-pituitary-adrenal (HPA) axis have been implicated as a core feature of this depressive phenotype, especially cortisol dysregulation. Despite this recognition, there is no consensus about unique characteristics of the cortisol profile that may underlie postpartum depression (PPD) and how this profile may differ in related types of psychological distress during the postpartum. We examined the association of PPD with women's average cortisol level, cortisol awakening response (CAR), and cortisol decline across the day (diurnal slope) at 6 months postpartum and compared these associations to those found for postpartum anxiety and stress.

Methods: At 6 months postpartum, a diverse group of 58 women (M=34 years) completed measures of depression, anxiety, perceived stress, and life stressors. These measures included the Patient Health Questionnaire-9, the Generalized Anxiety Disorder Scale, the Perceived Stress Scale, and the revised Crisis in Family Systems Questionnaire. Each woman provided a total of 8 salivary samples from waking to bedtime over 2 consecutive days for cortisol assay. Linear regressions were used to examine associations of stress, anxiety and depressive symptoms to each of the 3 cortisol measures (average cortisol, CAR, diurnal slope), controlling for number of stressors in women's lives.

Results: More severe depression was associated with a blunted CAR (β =-.46, p=0.01), steeper diurnal slope (β =.57, p=0.003), and higher average cortisol level (β =.38, p=.04). Women who met the clinical cutoff for a potential depression had an increased average cortisol level (β = 0.28, p=0.048), and a steeper diurnal slope (β = 0.40, p=0.006). In direct contrast to depression, women who met the clinical cutoff for a potential anxiety disorder had a decreased diurnal slope (β =-.28, p=0.04), and lower average cortisol levels (β =-.29, p=0.039). No cortisol metric was associated with stress.

Conclusions: Results indicate that PPD is linked to alterations in the HPA axis of postpartum women even six months after delivery. Cortisol alterations associated with depression were observed both with increasing depressive symptoms and when comparing more severely depressed women with those who did not meet that cutoff. In contrast, anxiety had directly opposite relationships with cortisol metrics than those observed for PPD, and cortisol markers appeared to show utility for anxiety only when anxiety was more severe. Anxiety and depression thus appear to be associated with distinct and opposite profiles of cortisol dysregulation. Cortisol did not appear to be a useful marker of perceived postpartum stress. Understanding cortisol dysregulation in women's PPD and how it differs from other types of psychological distress will enable a clearer definition of the PPD phenotype. This knowledge will ultimately enhance nurse's ability to provide more appropriate interventions for PPD. Ongoing mental health assessment during the postpartum is critical so that evidence-based interventions can be initiated to reduce emotional suffering as well as the risk of cortisol impairment and its health-related effects.

Funding: NIH R01 HD081188-05 (Weiss, PI)

CHARACTERIZING THE PHENOTYPE OF POSTPARTUM DEPRESSION

Infant Negative Emotionality May Contribute to Postpartum Depression

Karley Mariano, *MSN, CPNP-AC, University of California, San Francisco, CA;* ***Sandra J. Weiss***, *PhD, DNSc, FAAN, Community Health Systems, University of California, San Francisco, CA*

Background: Postpartum depression (PPD) affects at least 1 in 8 women who experience childbirth and is associated with many complications, including social isolation and difficulty returning to the workforce, and suicide in severe cases. There is evidence of negative impacts of PPD on the mother-infant relationship, including effects on perceived parenting ability and poor infant attachment. However, little attention has been given to the potential impact of infant emotionality on development or severity of PPD. There is preliminary evidence that an infant's degree of emotional arousal, distress, or irritability may contribute to a woman's risk for PPD, but little research has been conducted to better understand these relationships. The purpose of this study was to determine if greater infant emotionality is associated with symptoms of maternal depression at 6 months postpartum.

Methods: Secondary data were obtained from a longitudinal study that examined maternal depression during pregnancy and the first year postpartum. Data from 70 women were included in this analysis. Women completed a demographic questionnaire and depression assessment during their 3rd trimester of pregnancy. At 6 months postpartum, they completed an additional measure of depression and a questionnaire regarding their infant's temperament. Mother and infant also participated in a stressor protocol (the Still Face Paradigm; SFP) at this time. The negative affectivity scale from the temperament measure and standardized ratings of emotional distress in response to the SFP were our measures of infant emotionality. We used linear regression to determine the relationship of infant negative affectivity and emotional distress to mothers' PPD, controlling for depressive symptoms during pregnancy and prior diagnosis of depression.

Results: On average, women were 36 (± 5.0) years of age, with 85% in a committed relationship. 28% had a prior depression diagnosis. Postpartum depression ranged from asymptomatic to severe, with 10% of women meeting the cutoff for Major Depressive Disorder. Infants had an average gestational age of 38 weeks and 56% were girls. 22% of mothers and infants were African or Asian American and 25% were Hispanic. Infant negative affectivity (β=0.24, p=0.011) and degree of emotional distress in response to the SFP (β =0.24, p=0.010) were significantly associated with mother's depressive symptoms, while controlling for diagnosis of depression prior to or during pregnancy. Variables in the model accounted for 45% of the variance in PPD (F=13.49, p=0.000). Neither women's depression during pregnancy nor their depression at 1 month postpartum predicted infant emotional distress in response to the stressor at 6 months postpartum. In contrast, infant emotional distress at 1 month of age did predict maternal depression at 6 months postpartum (r=0.18, p=0.045). These supplemental findings supported the direction of hypothesized effects in the regression model.

Conclusion: Findings indicate the importance of infant emotionality as a potential factor contributing to PPD and the need for early assessment of infant behavior and mother-infant interactions, especially among women with a history of depression. Interventions can then be initiated to assist mothers in caring for infants whose more challenging affective behaviors may contribute to development or worsening of PPD symptoms.

CHARACTERIZING THE PHENOTYPE OF POSTPARTUM DEPRESSION

Social Support and the Effects of Discrimination on Postpartum Depressive Symptoms

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Background: The postpartum period is a time of significant stress and vulnerability for the development of maternal depression. Given this vulnerability, it is vital to identify factors that both contribute to and protect against postpartum depression symptoms. Discrimination is a pervasive social stressor that has been associated with negative effects on emotional wellbeing and may contribute to risk for postpartum depression (PPD). In the US, healthcare-related discrimination is prevalent, with estimates suggesting that one in five adults experience discrimination. Furthermore, more than one third of Black or African American and Latinx adults, along with their family members, have encountered instances of discrimination within the healthcare system. One potential protective factor is social support which may buffer the effects of social stressors such as discrimination on postpartum depression symptoms. The effects of health care discrimination on women's PPD must be better understood for nurses to address it effectively. The purpose of this study was to 1) to explore how discrimination relates to postpartum depression symptoms; and 2) examine whether social support exerts protective effects.

Methods: The sample included 2,510 mothers from the Child Community Health Network study at one month postpartum. Discrimination was measured with the Everyday Discrimination Scale. Social support was assessed with the Medical Outcomes Study Social Support Survey and both the total score as well as the four subscales (positive social interaction, affectionate support, tangible support, and emotional/informational support) were included in our analyses. Maternal depression symptoms were measured with the Edinburgh Postnatal Depression Scale. Linear regressions were conducted to explore the associations between exposure to discrimination and postpartum depression symptoms. Additionally, mediation analyses were conducted to explore if social support functioned as a mediator between exposure to discrimination and postpartum depression symptoms.

Results: Most mothers (40.3%) identified race as the predominant reason for discrimination. Experiencing discrimination was significantly related to postpartum depression symptoms (Effect=0.20, 95% CI [0.18,0.22], p= <0.001). The total score and each subscale of social support mediated this relationship, with positive social interaction (Effect=0.04, 95% CI [0.03,0.05], p= <0.001) and emotional/informational support (Effect=0.04, 95% CI [0.03,0.05], p= <0.001) having the strongest mediation effects.

Conclusions: These findings provide evidence of the link between exposure to discrimination, especially racial discrimination, and increased risk for postpartum depression. Evidence from mediation analyses suggests that social support may act as a protective factor in reducing effects of discrimination on postpartum depression. Results indicate the need to: a) promote assessment of PPD in primary care settings, b) integrate and emphasize social support into existing nursing interventions, and c) actively address discrimination in healthcare through changes in the health care system. The role of these factors in understanding the PPD phenotype will be discussed, especially for those who experience discrimination.

CHARACTERIZING THE PHENOTYPE OF POSTPARTUM DEPRESSION

Stressful Events, Cortisol Concentration and Persistence of Postpartum Depression

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Background: Historically, postpartum depression (PPD) was thought to resolve substantially by 12 weeks after childbirth, in conjunction with the stabilization of dynamic hormonal changes occurring during the perinatal period. However, there is growing recognition that depressive symptoms can persist well beyond this point in time, although the duration and characteristics surrounding their persistence are not clear. Stressful life events are recognized as a risk factor for development of PPD but have not been examined for their role in its chronicity. Similarly, alterations in the Hypothalamic-Pituitary-Adrenal (HPA) Axis are putative mechanisms in development of perinatal depression, especially cortisol dysregulation, but have not been evaluated as a mechanism in PPD persistence. The aims of this study were: 1) to determine changes in the prevalence of women's depression at 1, 6, and 12 months postpartum and whether specific symptoms change over time, and 2) to assess the differential effects of stressful life events and women's own stress physiology (level of cortisol concentration) on changes in depression over the first year postpartum.

Methods: Women were recruited during the 3rd trimester of pregnancy as part of a larger cohort study. They completed a measure of stressful life events (Crisis in Family Systems Questionnaire-Revised) and provided 8 saliva specimens over a 2-day period that were assayed to identify average cortisol concentration. At one month postpartum, participants contributed a hair sample that was assayed for average level of cortisol concentration over the prior 3 months. They also completed a depression assessment at this time (the Patient Health Questionnaire-9) which was completed again at 6 and 12 months postpartum. Linear mixed models with repeated measures were used to examine the aims.

Results: Data from a diverse group of 177 women were used in this analysis. 43% were from a racial heritage that was not White/European American and 28.5% were Hispanic/Latina. Repeated measures indicated that overall symptom burden was higher at 1 month postpartum than at later timepoints ($\beta=2.45$, $p=0.037$). However, difficulty concentrating, restlessness/psychomotor problems, fatigue and suicidal ideation showed increases in prevalence of 6% to 11% from 1 to 12 months postpartum. Additionally, 15% of women met the cutoff for clinical depression at 1 month postpartum, increasing to 17.1% by 12 months. Greater exposure to stressful life events was significantly associated with more severe depression at all timepoints across the 12 months ($\beta=2.047$, $p=0.03$). Cortisol concentration also predicted depression across time, but with uniquely different effects at one month postpartum than at 6 and 12 months ($\beta=3.63$, $p=0.017$).

Conclusions: Although frequency of total symptoms may be initially higher at 1 month postpartum for women overall, severity of PPD and the prevalence of certain symptoms increase for a substantial percentage of women over the first year postpartum. Women's exposure to stressful events and their level of systemic cortisol help to explain variance in depression across the year. Implications of these findings will be discussed, considering the natural flux of stress-related hormones over the course of the postpartum and the influence of the HPA axis in the PPD phenotype.

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Overview: Growing Our Own: Rural Nursing Workforce Development

***Patricia Barfield**, PhD, PMHNP-BC, School of Nursing, Oregon Health & Science University, La Grande, OR*

Purpose: Achieving rural health equity requires a strategic approach to recruiting, educating, and supporting a high-quality nursing workforce aimed at improving healthcare access and outcomes for all. In this symposium we discuss how Area Health Education Centers (AHEC) and nursing programs work together to grow the rural nursing workforce.

Background: An estimated 20% of US citizens live in rural communities. By definition, a rural community is located ten miles or more from a population epicenter of 40,000 or more; while frontier communities have six or fewer residents per square mile. The disparate health-related challenges rural/frontier dwellers experience (e.g., travel/transportation, access to care, workforce shortage) were magnified by the COVID-19 pandemic. Lacking the infrastructure and resources more typical of urban centers, rural communities depend upon a ‘grow your own’ approach to workforce development and nursing is no exception.

Undertaking: Linked in our shared goal to advance rural health equity through education, we have created an intentional approach to recruit, educate, and support the nursing workforce in rural Oregon. Beginning in high school, students enrolled in a pathway program are exposed to the world of nursing and other health professions through hands on learning, job shadow, and mentorship. Undergraduate nursing students enrolled in a rural campus receive a variety of rural health clinical experience. For this symposium we will highlight our pre-licensure primary care program. Rural dwelling (place-bound) graduate nursing students enrolled in the family nurse practitioner (FNP) and psychiatric mental health nurse practitioner (PMHNP) programs are educated in innovative ways within their rural immersion experience. Integral to all programs – pathway to graduate nursing is the academic support from our partners. Each program adds to the collective effort to successfully grow the rural nursing workforce.

Outcomes Achieved: Each program in the symposium will highlight their unique contribution to “growing our own” rural nursing workforce development. From high school, to undergraduate, and graduate school, rural students have the opportunity to remain in their own community and obtain high-quality education, training, and mentorship. The collective program outcomes include increased reach and access to students across rural regions and diverse populations, and increased interest in healthcare careers, including undergraduate and graduate level nursing. Success is measured through specific program outcomes and retention in career choice and rural practice settings. A key to success across all programs is educating in place and collaborative partnership.

Conclusions: A grow y/our own approach to rural nursing workforce development begins in the K-12 period when students are exploring career options. Pathway programs that expose students to healthcare careers is an important first step. Entry into undergraduate nursing in full measure, which includes education into primary care nursing, expands rural regional nursing resources beyond hospital walls. Graduate level nursing education to place bound learners is essential to the provision of rural healthcare providers and access to care.

A Pathway to Rural Nursing Workforce Development

***Meredith Lair**, Northeast Oregon Area Health Education Center, La Grande, OR*

Purpose: As the college attainment gap between rural and urban students widens, exposure to healthcare career pathways is more important than ever. This presentation will highlight a "grow your own" career pathway to rural nursing workforce development through collaborative partnerships.

Background: Eastern Oregon is a vast and geographically isolated part of Oregon where the distance people travel for healthcare often includes mountain passes, large canyons, no cellular service, and can exceed 75 miles. In our 96,000 square mile state, the counties identified as eastern Oregon encompass half of these square miles with only two state approved nursing education programs in the region. As a result of our rurality, growing, diversifying, and retaining the nursing workforce does not happen overnight. It starts with early exposure to health careers, continued mentorship, and regional access to high quality education.

Undertaking: The OHSU School of Nursing at Eastern Oregon University and the Northeast Oregon Area Health Education Center (NEOAHEC) work in lockstep using the NEOAHEC's MedQuest Health Career Exploration Camp to immerse high school students from underserved and underrepresented backgrounds throughout the region to create a pathway to nursing through job shadows, simulation, hands-on skill building, and near peer connection. Recognizing the demand for highly qualified nurses, NEOAHEC and the School of Nursing have gone beyond the early pathway investment and collaborated to support the distance delivery of the Doctor of Nursing Practice Psychiatric Mental Health Nurse Practitioner Program.

Outcomes: MedQuest has served 989 students across the 13 rural counties in the NEAOHEC service area and beyond since 1994. MedQuest student demographics indicate that we are reaching a diverse and underserved population: 23% of students report as Hispanic/Latino/a/x, 6% as American Indian or Alaskan Native, 7% as Asian, 3% as Black or African American, and 61% as White. First generation students comprise 90% of the students and 94% of students depend upon financial aid to attend camp. In 2023, NEOAHEC expanded its MedQuest program by offering it at three in-person locations and virtually increasing the camp capacity by 150%. To ensure that MedQuest was inclusive to underrepresented students in the Hispanic and Latino/a/x community in The Dalles and Hood River, a Juntos MedQuest Camp was developed and offered at a time that provided equitable access based up on feedback received. The data suggests that over two-thirds (72%) of MedQuest campers go on to pursue and/or work in the healthcare field and nearly half (46%) are in nursing (CNA, RN, APRN).

A related "grow y/our own" collaboration between the OHSU School of Nursing and NEOAHEC is the PMHNP distance program serving place-bound learners from Eastern Oregon. The program has graduated two PMHNP providers and admitted a total of ten learners from the region. The 3-year grant that supported this program expansion provided $500,000 in scholarship support to the leaners pursuing this advanced education.

Conclusion: Rural partnerships that establish early exploration of health careers via pathway programming and the provision of high-quality nursing education for place-bound learners offers a sustainable path to rural nursing workforce development.

GROWING OUR OWN: RURAL NURSING WORKFORCE DEVELOPMENT

Preparing Pre-Licensure Nursing Students for Community-Base Primary Care Practice

***Patricia Barfield**, PhD, PMHNP-BC, School of Nursing, Oregon Health & Science University, La Grande, OR*

Purpose: The Oregon Primary Care Transformation (OPACT) program addressed educational barriers to primary care nursing through the recruitment and education of pre-licensure nursing students in rural/underserved community-based primary care (CBPC) settings. The purpose of this presentation is to share program outcomes and lessons learned.

Background: Primary care is the entry point into the healthcare system, especially in rural/underserved communities. As our nation shifts from a focus on episodic acute care, to the provision of high-quality primary care, nurse educators must ensure that the next generation of nurses is prepared to take on expanding roles within the CBPC setting. One key barrier to optimizing the RN role in primary care has been a lack of pre-licensure education. Until recently, most primary care nursing education was provided at the graduate level or post-licensure through on the job training. In 2018, the US Health Resources and Services Agency (HRSA) funded the Nurse Education, Practice, Quality and Retention Primary Care (NEPQR-PC) Program. The Oregon Health & Science University School of Nursing received a $2.4 million training grant, funding the OPACT Program.

Undertaking: OPACT focused on four key objectives: (a) curriculum modification, (b) recruitment of pre-licensure students interested in primary care, (c) development of CBPC practice partnerships, and (d) identifying varied models of CBPC nursing. The OPACT team consisted of a Project Director, Partnership Liaison, Program Evaluator, Research Assistant, and Clinical Faculty. An initial literature review helped to identify core CBPC knowledge and skills. Concept based learning activities were developed and delivered in seminars. Pre-licensure students enrolled in select senior level courses were recruited, interviewed, and selected for program participation. CBPC clinics in rural/underserved communities were identified and RN preceptors were recruited. Metrics were designed/selected to evaluate program outcomes. The OPACT program was delivered statewide across four different campuses from 2018 to 2023.

Outcomes Achieved: Ten CBLAs on core CBPC topics were developed and launched (health equity, triage, patient safety, fiscal management and policy, quality management, RN support for chronic disease, population health, team-based care, informatics, and care coordination). Pre-licensure students (n = 109) completed over 2,195 hours of CBPC education. Students across all years showed significant ($p > 0.5$) increases from pre- to post-participation in OPACT in knowledge, skills, and attitudes related to CBPC and significant ($p > 0.5$) gains in their self-efficacy and performance beliefs related to support for patient self-management. The majority (90%) of students were satisfied with the OPACT program and 94% reported an increased interest in working in primary care. Collectively students completed 26,250 hours of CBPC clinical experience. A total of 38 new CBPC practice partners were developed and 64 CBPC RNs served as preceptors. Models of care were varied and specific to practice sites.

Conclusions: Preparing pre-licensure nursing students for CBPC practice via embedded CBLAs and clinical experience is an effective pedagogical approach to prepare them for expanding nursing roles within the community setting.

GROWING OUR OWN: RURAL NURSING WORKFORCE DEVELOPMENT

Providing Graduate-Level Nursing Education to Place Bound Learners

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Purpose: Achieving rural health equity requires access to high-quality healthcare services where people live, work, play, and age. The provision of graduate-level nursing education to place bound learners is directly linked to healthcare access in rural/underserved communities. This presentation offers an exemplar of Advance Practice Registered Nursing (APRN) distance education.

Background: Rural dwellers are often described as older, sicker, and poorer compared to their urban counterparts. Access to healthcare services in rural communities can be challenging for many reasons, including provider shortage and a lack of specialty training. APRNs, especially nurse practitioners, increasingly fill the role of healthcare providers in rural/underserved communities, affording access to high-quality healthcare in primary, urgent, acute, and mental health care settings. However, academic access barriers exist for rural nurses who want to seek high-quality advanced practice nursing education. The success of rural NPs is dependent upon practice-ready education, mentoring, and collaboration.

Undertaking: The Oregon Health & Sciences (OHSU) School of Nursing works in partnership with the Northeast Oregon Area Health Education Center (NEOHEC) to deliver grant-funded graduate-level nursing education to place bound learners through the Family Nurse Practitioner (FNP) and Psychiatric Mental Health Nurse Practitioner (PMHNP) programs. The ability to educate FNPs and PMHNPs in place is critical to promoting health equity and access to care in rural communities. The students stay in their rural communities with minimal travel to their regional campus for hands on skill-based learning. Regional faculty who are familiar with the rural healthcare practices and culture, help to educate, train, and assess student needs and progression. Regional faculty conduct site visits and maintain academic clinical partnerships. The NEOAHEC team helps to identify and engage preceptors who enjoy and support student learning. The students attend synchronous classes via videoconferencing and complete their course work online asynchronously. APRN faculty receive hybrid course delivery education and information technology support.

The FNP program also participates in a rural-immersion clinical experience, coordinated with OHSU's Campus for Rural Health and NEOAHEC. FNP students and interprofessional students (i.e. dentistry, pharmacy, and medicine) live and work in the same rural community during a 4-week rotation culminating in an interprofessional, community-based, quality improvement project. Students are provided housing at their rural site and work 40-50 hours a week. Students become familiar with rural healthcare issues, resources, and experience the impact of interprofessional teamwork.

Outcomes Achieved: Retention rates of place bound APRN students is exceptional; 90% for FNP students and 100% for PMHNP students. Approximately 7% of rural immersion FNP students opt to accept positions in rural communities. Student surveys indicate students feel connected to their cohorts and feel supported in their education and transition to practice. Additional details will be provided.

Conclusions: APRN nursing education programs adapting to distance education modalities as a means to increase the rural healthcare workforce need to assess the unique needs of the student's community. Critical to student support and clinical site access is the collaboration with regional faculty and partners.

HACIENDO Y DESHACIENDO:
LATINO/X HEALTH RESEARCHERS FORGING AN EQUITABLE ENVIRONMENT

Overview: Haciendo y Deshaciendo: Latino/x Health Researchers Forging an Equitable Environment

***Adrienne Martinez-Hollingsworth**, PhD, RN, PHN, Nursing Administration, Gateways Hospital and Mental Health Center, Los Angeles, CA; **Ali Tayyeb**, PhD, RN, NPD-BC, PHN, FAAN, RN-Mentor Consulting, Los Angeles, CA; **Julio Cesar Loya**, PhD, RN, College of Nursing, University of Arizona, Tucson, AZ*

Latino/x are the largest minority group in the United States (US), representing nearly 1/5th of the population (18.5%), and are anticipated to grow over the next 30 years to 119 million. Despite this upward trend, commensurate representation across Latinx health professionals lags nationally and is particularly notable in areas with a greater Latino/x population concentration, such as the Western states (12.7% of providers in California are Latino/x, compared to 40.3% representation in the overall population). While Latinos/x are a large portion of healthcare workers (2.2 million nationwide), they are concentrated in unlicensed positions (such as health aide or medical assistant [17.1%]), and few practice independently as nurses (8.4%) where their personal familiarity with barriers to preventive care and uptake treatment for chronic illness in their communities can be successfully leveraged. New perspectives and novel strategies are needed to improve US Latino/x health disparities associated with changing social and environmental climates.

Purpose: This is the 2024 symposium submission of the WIN *Latino/x Research with Individuals, Families, and Communities* Special Interest Group. This year, we explore the question, "How are changing social and environmental climates being addressed by contemporary Latino/x health nurse scientists across academic, clinical, and community spaces?" Our presenters highlight gaps in current research and systems of care while describing successful efforts to support the recruitment, training, and retention of Latino/x nurse clinicians, educators, and researchers.

Methods: We offer four projects undertaken by US Latino/x health scientists in changing social and environmental climates: 1) a recruitment strategy addressing structural, financial, and logistical barriers impeding enrollment of Latino/x Licensed Vocational Nurses in a Registered Nurse pipeline program; 2) a higher education project exploring the translation of a vetted Strategies for Success (S4S) method in a Latino/x prelicensure nursing cohort; 3) a literature review exploring gender diversity in diabetes research studies among Latinos/x participants; and, 4) a marketing strategy implementation project for a regional Latino/x Special Interest Group (SIG) supporting recruitment/retention of working Latino/x nurse scientists and clinicians.

Results: Across these projects, Latino/x health researchers describe successful strategies to improve equitable access to and participation in all aspects of nursing care. The two projects supporting Latino/x nursing students resulted in robust recruitment (20/20 spaces filled), and improved N-CLEX pass rates post-S4S implementation (as low as 35% to 87.5% in four months). The literature review exploring male Latino participation in diabetes research identified a lack of inclusion (as low as 18%, compared to a high of 81% among self-identified females). Finally, the Latino/x SIG marketing strategy expanded membership on the group website (15 added in the first six months) and increased health equity-focused abstract submissions to a regional conference by five (5) compared to previous years (2018-2023).

Conclusion: “Haciendo y deshaciendo,” or the “doing and undoing” of historically exclusionary spaces in nursing education, research, and practice, requires recognition of the persistent impact of social and environmental climates on inclusion across the pipeline. This symposium offers promising strategies for creating/re-envisioning these supportive spaces to improve health equity among US Latinos/x.

Recruiting & Enrolling Latinx Vocational Nurses in a Registered Nurse Training Program

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Purposes/Aims: 1) Describe the creation of a recruitment strategy for a Licensed Vocational Nurse (LVN) to Registered Nurse (RN) pipeline program in a predominantly Latino/x-serving Federally Qualified Health Center (FQHC) system in a historically Latino/x Southern California (CA) community. 2) Quantify the impact of recruitment program design that addresses structural, financial, and logistical barriers and social determinants of health needs that may impede enrollment of LVNs in an RN program.

Rationale/Background: Many Latino/x chronic health disparities are associated with social and built environmental factors that directly impact morbidity and mortality outcomes. Individuals with personal cultural knowledge and awareness of built environment challenges are equipped to address these barriers to treatment uptake and improve the health of historically divested communities. As such, the recruitment and support of LVNs from the local Latinx communities they serve may benefit overall community health due to their unique insight into the built environment and socio-cultural barriers to treatment adherence.

Methods: A safety net, ambulatory care system serving predominantly Latinx communities in Southern California partnered with a local college of nursing to create an LVN to RN program for their current workforce with an emphasis on supporting access for individuals who may face barriers to advancement along the nursing career ladder. A robust support strategy addressed challenges to recruiting applicants associated with financial, academic, and social support constraints. The program runs from July 2021 - June 2025 (4 Years), with a plan to enroll four cohorts of 5 incumbent LVNs each (total 20). Various supports addressing negative social determinates and community divestment were provided, including 95% coverage of program tuition costs, including uniforms and academic resources (books, online applications for practice HESI exams), interview skills development, and financial support for pre-enrollment physicals/lab testing (PPD, CXR, titers) to support program acceptance, tutoring in pre-requisite classes and academic writing skills, training in systemic bias and/or microaggressions often encountered during enrollment/matriculation in nursing programs, and protected time (16 hours of clinical work/week) allowing for continuation of full-time employment status during program.

Assessment of Findings/Outcomes Achieved: Program recruitment/enrollment target was met with all open positions filled (20/20). Most enrollees self-identify as Latino/x (90%), are bilingual in English/Spanish (92%), are the first generation to attend college (85%) and are the first person in their family to pursue a career in healthcare (95%).

Conclusions: Our holistic recruitment/enrollment strategy allowed for full enrollment across all cohorts and supports the future use of robust, comprehensive strategies that address financial, educational, and sociocultural/psychological factors that may impede the recruitment of underrepresented minority (URM) LVNs into RN training programs. Future qualitative and mixed-method explorations will follow enrollees to determine additional needs as they matriculate and inform the development of other healthcare pathway programs among URM healthcare workers, including Medical Assistant to LVN and RN to Nurse Practitioner.

Funding: Health Resources and Services Administration (HRSA) grant 5D19HP42030-02-00

HACIENDO Y DESHACIENDO:
LATINO/X HEALTH RESEARCHERS FORGING AN EQUITABLE ENVIRONMENT

Latinx Pre-Licensure Strategies for Success for an Equitable Environment

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Purposes/Aims: The Risk Assessment Profile Strategies for Success (S4S) Program was adapted to address low pass rates in a nursing prelicensure program in a predominately Latinx student population in East Los Angeles, a historically Latino/x community in Southern California (CA).

Rationale/Background: Equity promotion has been recognized as a route to increased participation in the nursing field among historically underrepresented students. This includes the ability to foster equitable systems/environments (Cooper, 2016) and recognize the differences in resources needed to allow individuals to fully participate in society, including access to higher education (Kranich, 2001). Following the CA Board of Registered Nursing (BRN) “warning to close” censure of a predominately Latino/x student-serving, nursing prelicensure program, the S4S used this perspective on equity to address a low quarter-year pass rate (54%) and reopen for student admissions. The Risk Assessment Profile S4S (RAPSS), a tool previously developed as part of the S4S Program, and student interviews focused on barriers and challenges, informed the creation of a diversity, equity, and inclusion (DEI) initiative to assist these underrepresented students to overcome academic challenges reflecting family responsibilities related to socio-cultural aspects, and financial aspects inhibiting their success.

Model/Methods: Risk was assessed with the RAPSS instrument and further developed via structured student interviews to determine students’ challenges related to family, academic, and financial factors. An individualized S4S prescription plan was developed for each student to help them overcome risks and increase their success in the program.

Assessment of Findings/Outcomes Achieved: The enrolled students (n=54) in this S4S program, had a mean age of thirty-two; age range 22 to 52 years, forty-six female (85.2%), and eight male (14.8%). A total of twenty-nine students identified as Hispanic (53.7%); 20 Asian (37%); 3 White (5.6%); and 2 Black (3.7%). In the prior 12 years, 35% to 46% graduates annually did not pass NCLEX on first attempt and repeated the NCLEX 4 to 11 times. In the first four months following program implementation, NCLEX pass rates increased to 87.5%, lifting the admission pause contingent on the ongoing use of the S4S program. After 5 months, the graduating student cohort reached a 97% predictability to pass NCLEX and the first-time pass rate for the quarter was 90%, putting the annual pass rate at 87.5% in the first quarter, 77% in the first year, which was above the 75% CA BRN minimum regulation.

Conclusion/Next Steps: Due to the urgent need for RNs in predominantly Latinx-serving East Los Angeles health centers (and nationally), the major impact of S4S implementation argues a need for expanded use of this successful program. The key recognition of individualized challenges and use of tailored mitigation strategies to improve student outcomes underscores the persistence of negative social determinates of health and access disparities in Latino/x communities and students in Latino/x-serving institutions.

Supporting Increased Engagement Among Latino Men in Diabetes Research

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***Sarah E. Choi**, PhD, RN, FNP, School of Nursing, University of California, Los Angeles, CA*

Background: Latinos are the fastest-growing minority group in the United States (U.S.) and experience a disproportionate burden of Type 2 diabetes (T2DM) and its related complications. For racial and ethnic minorities, T2DM is the sixth major cause of disability, and the seventh-ranked leading cause of death in the U.S. Current diabetes care guidelines recommend Diabetes Self-Management Education (DSME) for all patients with T2DM, as DSME interventions lead to significant clinical and health status improvements for participants. Effective DSME programs incorporate participants, families, healthcare providers, and the health system to improve outcomes through engagement in lifestyle behavior change, medical management, and support. However, utilization is low; less than 5% of eligible participants access the programs, and this number is significantly lower among Latinos, especially among Latino men. Decreased engagement may be due to economic factors, environmental disadvantages, and social climates (i.e., socioeconomic factors, disparities in insurance coverage, healthcare system navigation, DSME availability, geographic location, culture, language, gender, and mental health).
Purpose/Aims: A limited number of studies have focused on DSME interventions in Latino adults. This systematic review sought to identify possible inequities in diabetes self-care management education and reviewed current research regarding environmental factors related to access and participation in Diabetes Self-Management education research among Latino adults, focusing on Latino men.
Methods: The examination of relevant peer reviewed publications began with a structured search, utilizing keywords, controlled vocabulary in three databases, with MESH terms across: PubMed, CINHAL, and PsycINFO. The following inclusion criteria were applied to this search: (1) publications available in English, (2) within the last ten years (2012-2022), (3) diagnosis of T2DM in adults, (4) DSME, (5) Hispanic or Latino, and (5) Hemoglobin A1c among the outcomes.
Results: Eligible studies (*n*=18) were identified for this systematic review. Latinos were, on average, 50 years of age and were diagnosed with T2DM for an average of eight (8) years. The age of diagnosis for Latinos is younger than non-Latino whites (median age 49 years versus 55 years, respectively), posing greater risk for earlier complications in the presence of environmental and social climate challenges. The average percentage of male Latino participation in the studies was approximately 32% (range 19% to 41%), compared to female Latino participation of 68% (range of 59 to 81%).
Conclusion/Implications: There are inequities in published diabetes care outcomes for Latino adults, and especially among Latino men participating in DSME interventions. Nursing practice can better shape diabetes care outcomes and improve healthcare delivery through DSME research improvements, and health system changes that lead to increased engagement capturing absent or under-represented voices in the Latino/x community, including men. Well designed collaborative diabetes health research and nursing research interventions must address environmental obstacles, specific to the Latino demographic by tailoring DSME research to address literacy, psychosocial needs, language, age, gender, social climate and culture.

HACIENDO Y DESHACIENDO:
LATINO/X HEALTH RESEARCHERS FORGING AN EQUITABLE ENVIRONMENT

Expanding Engagement in a Latinx Special Interest Group through Marketing Strategies

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Purpose/Aim: 1) This project aimed to develop and implement an effective marketing strategy to expand engagement for the Western Institute of Nursing *Conducting Research with Latinx Individuals, Families and Communities* Special Interest Group (WIN Latinx SIG); and 2) leverage technology and social media platforms to expand access to mentorship and collaboration opportunities for nurse scientist members.

Rationale/ Background: With the increasing attention on Equity, Diversity, and Inclusion (EDI) in nursing, a predominantly white female profession, SIGs are pivotal in advocating for minority rights, increasing awareness, and creating a safe, collaborative environment. Due to significantly low representation of minorities in the nursing profession, especially in research, many SIGs face challenges in reaching their target audience, effectively communicating their intent, and promoting the work of the SIG. The intent of this project was inspired by the need to address the recruitment/retention challenges faced by the SIG and provide a comprehensive tool kit and strategies needed to amplify their voice and influence.

Method: This project took a multifaceted approach to developing and implementing a marketing strategy for the WIN Latino/x SIG. The approach included a review and gap analysis of the current membership, communication methods, outreach, and presence in the nursing community using marketing literature and expertise. The SIG also created goals and priorities based on its mission. Based on the findings, the SIG leadership developed executable strategies and engaged in content development, social media engagement, influencer partnerships, event promotions, data analytics, and advocacy initiatives as key components of the marketing model.

Outcomes: This marketing strategy has resulted in increased engagement by new Latino/x scientists' engagement and interest, increased visibility, expansion of the SIG's outreach and presence, greater awareness of the mission of the SIG, and a comprehensive model that other SIGs can adopt. Creating a WIN Latino/x SIG website expanded membership by 16 nurse scientists who shared research interests and contact information to expand their cross-regional collaboration. Additionally, outreach created two group symposiums for the 2024 WIN "call for abstracts" (five more health equity-focused abstracts than previously submitted in 2018-2023).

Conclusion/Next Steps: This project aims to expand engagement and empower SIGs to advocate through an effective evidence-based marketing strategy. By tailoring marketing efforts, the SIG created a professional platform and improved engagement and impact. It also collected and analyzed marketing engagement activity, shared content, news, and resources. This has allowed the Latinx SIG to review available marketing data to make incremental changes and increase the visibility and engagement of its members. This project has set the foundation for a forward look at the SIG's sustainability and scalability and ensures the continued success and advocacy for a more inclusive and safe space for minority nurses engaged in research across the Western states.

METHODS TO SUPPORT THE INCLUSION OF CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN RESEARCH

Overview: Methods to Support the Inclusion of Children with Complex Health Conditions and Their Families in Research

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Achieving health equity for children with complex health conditions and their families necessitates their inclusion in research. The National Institutes of Health mandates the inclusion of children in human subjects' research unless a scientific or ethical reason for excluding them is present. Despite this mandate, many studies overlook the challenges facing children with complex health conditions and their families thus limiting their ability to participate in research studies.

Current research protocols pose several challenges for families. Pediatric patients and families with chronic health issues face significant burden based on the needs of their child. Research methods that do not account for this already high burden may inadvertently exclude participants. Some common barriers to research participation include protocols that require additional travel, increased caregiver burden after hospital discharge, and data collection methods that may be incongruent with the developmental needs of children. Many families require specialized pediatric care which is typically located in regional tertiary and quaternary healthcare settings. Research methods that require additional time and travel in addition to these visits can be a barrier to participation. Further, the caregiving demands experienced by parents following a child's discharge from the hospital may also limit their ability to complete study activities. Finally, the developmental abilities of children with complex health conditions may vary, requiring flexibility in adapting data collection methods while still ensuring the integrity of the research protocol.

The purpose of this symposium is to present innovative research methods designed to overcome participation challenges for children with complex health conditions and their families. The symposium will address inclusion in several forms. Our work focuses on recruitment strategies to support representative samples of children, parents, and siblings. Sessions will also address data collection methods from representative studies that are responsive to children's development, illness state, and family caregiving demands. Individual sessions will feature strategies to support research participation in diverse settings including the home, inpatient, and ambulatory care settings. The symposium will also address novel uses of registry-based data, including the incorporation of patient- and/or parent-reported measures which can be used to complement medical outcomes to better understand a more holistic range of child health outcomes.

Taken as a whole, the presentations in the symposium challenge nurse scientists to intentionally include children with complex health conditions and their families in research in a manner that reduces barriers to their participation, values their contributions, and can advance health outcomes.

METHODS TO SUPPORT THE INCLUSION OF CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN RESEARCH

Engaging Children with Cancer and Their Parents in Instrument Development

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Purpose: This presentation describes research methods that supported participation of school-age children with cancer (6-12 years of age) and their parents in a study to develop child and parent versions of instruments addressing 1) self-efficacy for symptom management and 2) symptom management behaviors. The study setting was the Center for Cancer and Blood Disorders at a tertiary hospital serving a multi-state region in the Intermountain West.

Description of Method: The study included: 1) a content validity phase followed by 2) a validation phase. Eligibility criteria focused on inclusivity with regard to the child's physical and cognitive ability to complete study activities rather than excluding potential participants based on diagnosis. Based on participant feedback, we incorporated study procedures that could be completed during an ambulatory clinic visit without disrupting clinical care to decreasing additional burden caused by additional travel. We also utilized methods designed to enable children of all ages to participate such as reading questions to younger participants. All research staff had experience working with pediatric populations. Children and parents were recruited as dyads.

During the content validity phase, children participated in cognitive interviews to ascertain their understanding of proposed items as well as their perceived importance. Children 11-12 years old were initially recruited to make any needed refinements prior to recruiting younger children. Parents completed content review surveys of proposed items where they rated the clarity and perceived importance of proposed items and could provide additional feedback. During the validation phase, children and parents completed their respective versions of the two newly developed instruments along with two established instruments.

Linking Methods to Research: Both study phases required collaboration with the clinical team. A clinician introduced the study and elicited the family's permission to be contacted. The study team member met with families to obtain assent/permission/consent and complete study procedures in coordination with scheduled clinical care.

Twenty-seven parent-child dyads were approached to participate in the content validity phase, and twenty-one participated (child median age 11 years; range 6-12 years). Initial recruitment of older children supported key refinements to phrasing of proposed items (e.g., "help myself feel better" versus "manage my symptoms") prior to interviewing younger children. Average duration of child interviews was 14.67 minutes (SD=3.62).

Seventy parent-child dyads were approached to participate in the validation phase, and 65 participated (child median age 9 years; range 6-12 years), meeting recruitment goals. Using two tablet computers allowed children and parents to complete measures simultaneously and minimized potential influence of the parent on the child's responses. Children completed the four surveys in an average of 12.25 minutes (SD=4.6). Parents completed their four surveys plus a demographic survey in an average of 12.84 minutes (SD=5.25).

Conclusion: Supporting participation of children with cancer and their parents in research requires intentional efforts to minimize research-related burden. Integrating research procedures into routine clinical care resulted in high participation rated and minimal disruption to clinical flow. Engaging clinic staff was vital to recruiting families and ensuring the time was built into clinic visits to allow for study participation.

Funding: Huntsman Cancer Institute Intramural Grant; University of Utah Presidential Scholar Award

METHODS TO SUPPORT THE INCLUSION OF CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN RESEARCH

Strategies for the Inclusion of Siblings to Children with Chronic Illnesses in Research

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Purpose: Siblings are an often-unrecognized vital caregiving resource to children with chronic illnesses and disabilities. Families raising children with chronic illnesses require substantial support from healthcare teams, yet often the other sibling(s) in the home are providing care without direction or support from these teams. Research strategies to become more sibling-inclusive are needed. Including siblings in research, education, and interventions enhances the quality of caregiving for a child with a chronic illness. The purpose of this project was to describe strategies and rationale for the inclusion of siblings to children with chronic illnesses in research and family-centered interventions. We describe strategies to include siblings that were implemented as part of a mixed-methods study and an intervention study to improve family and pediatric health outcomes. We present 1) accepted measurement tools for determining associations between sibling relations and family hardiness, 2) techniques for recruitment and inclusion of siblings, and 3) data collection and research interviewing strategies with siblings (aged 7 to 17) helping to care for children with chronic illnesses.

Description of Method: We explored strategies for including siblings to children with chronic illnesses via separate methodological studies. Specific methods included the use of qualitative interviews (n=20), descriptive survey tools for correlational data (Family Hardiness Index and Sibling Inventory of Behavior), and a behavioral intervention design (n=121). Recruitment strategies such as flyers with images focusing on the sibling interaction and retention strategies such as separate participant compensation for siblings facilitated inclusion of siblings. Sibling interviews were successful, in-part, due to the preparation of the sibling being interviewed, the ease at which scheduling around activities and school times were handled, and the individualized compensation to the sibling for participating. Rich qualitative data provided means to explore the experiences of siblings who were providing specialized care. Psychometrically validated survey tools were employed which were short in length to decrease burden. Surveys were carefully chosen which have previously been used to gather data on relationship quality between siblings when one has a chronic illness. Use of these tools added additional indicators for family functioning while allowing for convergence with qualitative themes achieved through the perspective of the sibling providing care.

Linking Methods to Practice: Efforts to include siblings of children with chronic illnesses in research were successful with >80% (n=141) of recruited participants who provided assent completing our different studies. The psychometrically-validated tools assisted in understanding statistically significant relationship indicators. Preparing siblings and caregivers with proper expectations for study time involved and goals of the studies allowed for positive experiences in which families expressed gratitude for the recognition of the complex dynamics and needs of these families. Siblings can successfully participate in family-focused interventions and provided new insights regarding the care provided to children with chronic illnesses.

Conclusions: Studies involving interviews, survey tools, and family-focused interventions are valuable and add a novel way to approach family-inclusive caregiving and support. Researchers, clinicians, and child advocates should recognize the importance of and techniques for successful inclusion of siblings to children with chronic illnesses in research.

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METHODS TO SUPPORT THE INCLUSION OF CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN RESEARCH

Participant-Centered Recruitment of Parents of Hospitalized Infants

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Purpose/Aims: We describe, caregiver-centered recruitment methods for parental caregivers of infants with complex congenital heart disease (CHD) to examine their social support networks during an acute hospital stay.

Rationale/Conceptual Basis/Background: Parents of children with chronic illness are underrepresented in caregiving research citing participation burden, lack of trust, and study related concerns as reasons for non-participation. Parental caregivers of a child undergoing CHD repair experience increased stress during the hospital stay, leading to anxiety and depression in both parent and child. More research is necessary to understand parental needs during this time. Unfortunately, the stress of hospitalization and caregiving responsibilities create barriers to participation.

Methods: We instituted a recruitment protocol focused on adapting procedures to accommodate parents. During an active study investigating social support networks of parents, the principal investigator recorded recruitment issues identified during recruitment discussions with parents. Participant accrual, barriers to recruitment, and current procedures were evaluated bi-weekly by the research team. Challenges were identified and discussed, and after receiving IRB approval, the protocol was adjusted to enhance flexibility and increase options for participants.

Based on parent feedback, we adapted the study to be more flexible and integrated technology by providing an iPad for parents to use to complete surveys. Interviews were scheduled at a convenient time for the parent during the hospital stay since parents were often too busy to complete the interview after discharge.

Results: Of the 48 eligible, 20 (41.7%) were enrolled. Twenty-eight families were not included: 20 (41.7%) due to inability to contact them prior to discharge, 2 (4.2%) received recruitment information but were not at the bedside for follow-up and 6 (12.5%) families declined to participate due to privacy concerns or increased stress. Of the 20 enrolled, 18 (90%) completed all study activities. The remaining two participants completed the online surveys but were unavailable for interviews after hospital discharge.

We enrolled 3 (15%) participants in the first 3 months and 17 (85%) in the last 3 months after protocol changes. Only 2 of the first 3 participants completed all study activities, 100% of those enrolled after the protocol changes completed all the study activities.

Both nurse and parent feedback were critical to making effective adaptations to the recruitment protocol. Based on nursing feedback, we expanded recruitment time to evening and weekends when fewer procedures were occurring, and parents were more likely to be available. We found leaving recruitment materials alone was not sufficient to encourage parent participation. We educated beside nurses about the study when leaving recruitment materials for families, which contained contact information for the PI. Utilizing nursing feedback to adapt the recruitment protocol improved connections to families when parents were more receptive to study participation.

Implications for Translation to Practice/Further Research/Policy: Increasing flexibility and decreasing burden were essential to supporting parents' participation. Improving study participation of parents of children with CHD in research--especially studies in clinical settings--necessitates the use of parent caregiver-centered methods. Actively involving parents and adapting research design is one method to minimize participant burden while also meeting parent needs.

METHODS TO SUPPORT THE INCLUSION OF CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN RESEARCH

Pediatric Organ Transplant Registry Data to Measure Child Health Outcomes

***Leandra Bitterfeld**, MSN, RN, Solid Organ Transplant, Primary Children's Hospital, Salt Lake City, UT*

Purpose: Explain how multi-center research registry data, including the use of patient-reported outcome measures, can be leveraged to better understand patient health outcomes and improve clinical care among pediatric solid organ transplant (SOT) recipients at a single tertiary children's hospital in the Intermountain West.

Description of Method: Multicenter registries are retrospective longitudinal observational studies with the goal of compiling data from a large number of pediatric SOT recipients across transplant centers that can be used to understand outcomes and guide care for SOT recipients. They are organ-specific and typically follow children from time of transplant to the end of pediatric care. Registries also vary regarding specific outcomes that are collected. These outcomes include graft and patient survival, rejection events, hospitalizations, infections, patient and home caregiver quality of life, and medication adherence barriers.

Informed consent is obtained either during the initial transplant hospitalization or subsequent clinic visits, and eligible patients are identified with the help of transplant nurse coordinators. Most of the registry data are collected via retrospective review of the child's medical record about every six months. Patient- (or parent-) reported measures are collected via surveys distributed by clinic staff at regularly scheduled clinic visits, typically at either 4- or 12-month intervals.

An additional source of data is the United Network of Organ Sharing (UNOS) database. Transplant centers are required to report data regarding transplant characteristics and outcomes to UNOS for every transplant they conduct, yielding a rich source of data that spans close to 30 years.

Linking Methods to Practice: While these registries are meant to collect and analyze large sets of data across institutions, we have leveraged our single center data to better understand and improve patient/parent-reported outcomes among our patients. Several projects have integrated registry data into clinical research and quality improvement. One project involved integrating a registry-based assessment of medication adherence barriers into clinic visit workflow, with multidisciplinary intervention pathways. Another project utilized UNOS data to understand the impact of social determinants of health (SDOH) among liver transplant recipients across the 37-year history of the program. Finally, a future project will combine registry-based quality of life and rejection data with results from SDOH screening among heart transplant recipients. Advantages to using data from registries include the ability to combine multiple data sources to evaluate a diverse set of outcomes, low burden on participants, a highly representative sample, and the ability to understand historic trends in outcomes.

We have found that successful implementation depends on identification and alignment of team goals with available data, leveraging bedside and clinic nurses to identify opportunities for recruitment, and dedicated resources for data entry and analysis.

Conclusion: Multicenter registry-based data can be used within a single center to improve care for pediatric SOT recipients. The burden of completing patient-reported measures is low and occurs in conjunction with scheduled visits. Factors related to success include the alignment of research with clinical goals of care or process improvement, and dedicated resources for data collection and analysis.

Overview: Our Patients (and Our Students) As Our Teachers

***Shawna M. Sisler**, PhD, MS, MA, MAPP, APRN, PNP, College of Nursing, University of Utah, Park City, UT; **Rebekah Perkins**, PhD, MS, RN, College of Nursing, University of Utah, Salt Lake City, UT; **Cynthia Garbett**, DNP, APRN, PMHNP-BC, Acute and Chronic Care, University of Utah, Salt Lake City, UT; **Danielle Bennett**, BSN, RN, PMH-DNP (student), Psychiatric Mental Health Nurse Practitioner (PMHNP) Program, University of Utah, Salt Lake City, UT*

As we transition to competency-based education (CBE), we introduced a formative pilot simulation-based education (SBE) for first-year psychiatric mental health nurse practitioner (PMHNP) doctoral trainee students to enhance their understanding of social determinants of health (SDOH) and therapeutic patient interaction. Our goal was to provide a secure space for trainees to develop skills in addressing patients' social needs and identify opportunities to strengthen SDOH competencies in the curriculum.

While our primary focus was on preparing trainees for in-depth psychiatric evaluations with empathic communication while addressing patients' social needs, we discovered the critical role of psychological safety (PS) in effective patient-centered SDOH screenings. This led us to explore how these interconnected concepts can improve nursing education. Creating psychologically safe and respectful learning environments is crucial for successful CBE outcomes, enabling learners to practice complex skills in group settings comfortably.

By incorporating PS and interpersonal communication into SDOH teaching, we can enhance patient care and nursing education. Initially, we emphasized 'patients as teachers' during our simulation briefings, but it became apparent that trainees can also serve as teachers, contributing to curriculum design and implementation based on their experiences and feedback. As we advance in competency-based nursing education, collaboration with trainees is essential to create equitable, responsive, and effective curricula.

Funding: TITe CONEx intramural grant (University of Utah, College of Nursing)

OUR PATIENTS (AND OUR STUDENTS) AS OUR TEACHERS

Implementing Novel Formative Simulation-Based Education for Nursing Trainees

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Purposes/Aims: We created a formative simulation to strengthen trainees' competence in assessing social determinants of health (SDOH), and to identify opportunities for integrating SDOH curricula that support competency-based education (CBE).

Rationale/Background: As nursing education shifts from traditional methods to CBE, there is an outstanding need to revamp curricula to support both knowledge and skill development focused in health humanism. Utilizing simulation-based education (SBE) can support students' application of knowledge and skill development in realistic, yet low-risk learning environments that further their professional identity.

Methods/Approach: An interdisciplinary team from a large state university designed a formative SBE intervention that emphasized SDOH. The intent was to facilitate CBE interventions that offer opportunities for students to apply their conceptual knowledge of SDOH through a simulated psychiatric mental health assessment–with the end goal of fostering clinicians who are competent to identify and advocate for patients' risks and unmet social needs.

The SBE intervention was video recorded and structured around 1) pre-simulation assignments and prebriefing from a Health Humanism seminar, 2) a case study utilizing standardized patient (SP) actors, and 3) video-recorded intra- and post-simulation briefings. The SBE intervention process consisted of provider assessments using trainees, SP actors, and student participant observers who systematically observed and recorded the interactions. Intra-simulation briefings provided trainees with individualized feedback from SPs, participant observers, and faculty. Post-simulation debriefing included two, split focus-groups composed of trainees, participant observers, and faculty.

Assessment/Outcomes: The outcomes of implementing a pilot SBE intervention were evaluated, confirming its feasibility (simulation design), usability (trainee's experience), and acceptability (the fit to CBE). Analysis of the pilot outcomes showed us that the design of the study matched the purpose of the study. The simulation sequence (splitting trainees into sequential groups) reduced the fidelity of the intervention by way of contamination–where the first group informed the second group about the underlying purpose–to assess trainees' baseline SDOH competencies. In terms of usability, trainees provided overall positive feedback about the experience. However, despite efforts to provide a psychologically safe learning environment, some trainees described discomfort with the experience from being observed and from not knowing part of the evaluation was to assess their competencies in identifying and addressing patients' risks and unmet social needs. Overall, the simulation provided trainees with a complex and realistic experience that developed their self-awareness and assessment skills in assessing and addressing social risks and unmet needs.

Conclusions: This study underscores the significance of creating quality SBE interventions, supported by simulation theory and translational science practice. This novel approach departs from mere theoretical education and checklist style skill development, signifying a shift towards more practice and effective paradigm. Future SBE interventions should prioritize the feasibility, usability, and acceptability of these programs, thereby enriching the knowledge and skills of trainees equipping them to deliver exceptional care. In the future, we plan to expand the use of this SBE model into training and skill development for prelicensure nursing students. Additionally, it will be integrated into doctoral education programs to help students practice sensitive patient conversations.

Funding: TITe CONEx grant -- intramural educational grant from University of Utah's College of Nursing

From Awareness to Action: Translating SDOH Competencies into DNP Curricula

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Aim/Purpose: To determine whether current teaching methods are adequately preparing psychiatric mental health nurse practitioner (PMHNP) doctoral trainees to recognize, prioritize, and inquire about social determinants of health (SDOH) during routine psychiatric assessments.

Background: National guidelines stress the importance of screening for and addressing unmet social needs. However, there remain many missed opportunities to improve patients' access to essential resources and care when healthcare professionals narrowly focus on medical management of symptoms and overlook the root causes and long-term impact of health disparities. As nursing education shifts to competency-based education (CBE), there is a pressing need to expand trainees' knowledge and skills to improve healthcare practices in social determinants of health (SDOH). Although SDOH concepts are taught in nursing education, there is variability in its teaching and evaluation. Formative simulation experiences can offer trainees a controlled environment to refine their SDOH screening skills—promoting patient-centered clinical interactions that focus on what matters most to the patient.

Methods: Nine, first-year PMHNP doctoral trainees participated in a 2-hour simulation-based education (SBE) intervention, centered around identifying unmet social needs. Trainees conducted a psychiatric intake with a standardized patient (SP) who followed a script punctuated with several unmet social needs, and a participant-observer (student) who acted as the attending provider. Key assessment criteria included trainees' ability to identify embedded unmet needs, therapeutic communication techniques, and subsequent treatment planning. The simulation and briefing sessions were video-recorded, transcribed, and thematic analysis was used by two members of the research team to code the data and identify emergent themes.

Results: Four themes were identified: 1) Time Barriers, 2) Knowledge Barriers, 3) Checklist Mentality, and 4) Not My Lane. Trainees recognized the importance of assessing unmet social needs but cited lack of time and knowledge as the primary hindrance to exploring the patient's SDOH factors—specifically stating that their primary objective was to complete the expected psychiatric intake questions. Trainees felt that broaching social needs without a means to address them was redundant or even counterproductive. Additionally, they expressed a sentiment that delving into social needs was not their primary role or "lane." There was a perceived misalignment of objectives – a tension between the perceived psychiatric assessment structure and those of a social needs assessment. Trainees viewed the two as separate, noting that the task of arranging resources was daunting, as their training largely emphasized DSM screening. Social needs screening was viewed more as "nice to have," which further impeded their focus on patients' social needs during assessments.

Conclusions: This intervention highlights several opportunities to develop CBE curriculum that enhances knowledge, attitudes, and skills in assessing and addressing patients' social needs. Future education can enhance SDOH competencies through SBE interventions that move a trainee from recognizing to actively addressing social needs with a deeper understanding and appreciation for the connection between patients' social needs and the broader root causes of social inequities—promoting actionable solutions to reduce existing health disparities.

Funding: TITe CONEx intramural grant (University of Utah)

Psychological Safety: An Antecedent to Critical Learning

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Aim/Purpose: To assess the impact and role that psychological safety has in formative simulation experiences with Psychiatric Mental Health Nurse Practitioner (PMHNP) doctoral trainees.

Background/Rationale: The shift toward Competency-Based Education (CBE) in nursing has led to a growing interest in using simulation as a means of offering practical learning opportunities and skill development. As faculty members contemplate the integration of Simulation-Based Education (SBE) into their curriculum, it’s crucial to recognize that Psychological Safety (PS) serves as the fundamental cornerstone. PS and SBE are interdependent, and PS plays a pivotal role in enabling students to venture into uncharted territories and experiment within the simulation environment. While the primary objective of SBE is to encourage students to practice and take calculated risks, the absence of psychological safety components can hinder their ability to engage in critical thinking and devise innovative solutions.

Methods: As part of a broader effort to enhance the quality of our education and transition to competency-based curricula, our team conducted a study to investigate the role of Psychological Safety (PS) in Simulation-Based Education (SBE). We focused on nine first-year PMHNP trainees. To assess PS during the simulation intervention, we looked at its key elements, including perceived empathy, cultural competence, and patient-centered care. Our approach was guided by Edmonson’s Psychological Safety and Intrinsic Motivation Model, which shaped how we observed participants and analyzed the study’s outcomes.

During the simulation, trainees conducted a psychiatric intake with a standardized patient (SP), while a participant-observer (a fellow student) assumed the roles of the attending provider. The simulation was divided into three segments: pre-briefing, intra-briefing, and post-briefing. To collect data, we conducted open interviews during the intra-briefing and semi-structured interviews during the debriefing with trainees, participant observers, and faculty members to understand their perspectives on the experience. These interviews and scales explored competencies in social determinants of health (SDOH), the growth mindset, and psychological safety, among others. All briefing sessions were video recorded, transcribed, and then analyzed by a team of three researchers using deductive thematic analysis.

Results: Our analysis of the PMHNP trainees’ interactions highlighted behaviors affecting their PS with simulated patients. Positive behaviors that enhanced PS fell under three main themes: 1) ability to use personal attributes therapeutically (the therapeutic use of self); 2) capacity to pause and recalibrate during interactions (pausing and resetting); and, 3) aligning with patients’ objectives (goal prioritization). Conversely, behaviors that detract from PS were categorized into: 1) uncertainty of simulation expectations; 2) fear of evaluation; and, 3) discomfort playing the provider role.

Conclusion: This study highlights the value of creating PS in SBE. When students feel psychologically safe, they are willing to be more authentic, practice the therapeutic use of self, and prioritize patient centered goals over resorting to symptom-based treatment. Without PS, students miss what SBE can offer–increased self-awareness and the opportunity to learn from mistakes. Practice settings that directly demonstrate the benefits of psychological safety leave lasting impressions on students, inspiring them to foster PS in future interactions toward positive, systemic practice change.

Funding: TITe CONEx grant - intramural education grant from University of Utah’s College of Nursing

Our Students as Our Teachers: An Autoethnography

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Purpose: This autoethnographic study describes the subjective experience of a psychiatric mental health nurse practitioner (PMHNP) doctoral student, collaborating with a faculty research team to co-construct a simulation-based education (SBE) intervention for social determinants of health (SDOH).

Rationale: Scant literature exists on the subjective interpretation of student collaboration in faculty research and pedagogical design in nursing literature and SDOH. As such, this study highlights and contributes to scientific knowledge regarding doctoral student experiences of engaging in faculty research and co-constructing curricula. Autoethnography is a form of self-reflection where culture and theory are explored through the subjective experience of the self. The author is a PMHNP doctoral student, well-positioned to examine her lived-experience within this educational context.

Method: The author describes her subjective interpretations of her experience as a doctoral student and her unique involvement in research and curriculum development as the lead standardized patient trainer. Autoethnographic methods were applied to guide this study, and the author used herself as the data source. Data were gathered from systematic observations of cohort members who engaged in an SBE intervention and from recorded and transcribed memos that described the author's experiences with engaging in faculty research and curriculum development, as well as impressions about the SBE intervention. Ethnographic analysis was applied to the transcription, where memos were manually coded by the author, then further reviewed and analyzed by research faculty, using the Atlas.ti/OpenAI software platform.

Results: Four main themes emerged from data analysis: Learning Continuum, Shifting Role Dynamics, Shared Vulnerability, and Transforming Professional Identity. The Learning Continuum had two prominent subthemes: 1) Reciprocity (i.e., teaching/learning between students and faculty) and 2) Shifting to Active Learning (i.e., moving from "knowing and doing" to "becoming a clinician"). Shifting Role Dynamics described students as collaborators and contributors to the educational experience. Shared Vulnerability pertains to the establishment of a psychologically safe learning environment. This environment is fostered when faculty members lead by example, showcasing vulnerability during both teaching and collaborative activities. Transforming Professional Identity describes the evolution from subjection to prescribed cultural norms to a new self-understanding and the expanded role of the doctoral student as creator, curator, and practitioner of knowledge.

Implications: This study demonstrates the benefit of enriching nursing education through collaborative learning experiences with students and faculty. These opportunities support equitable learning environments and active learning designs–promoting professional development and competencies (i.e., collaboration, communication, and teamwork). Enhancing opportunities for DNP students to engage in research, curriculum development, leadership, and advocacy is an essential component of their doctoral preparation.

Funding: TITe CONEx grant, intramural funding from the University of Utah, College of Nursing

RESEARCH, PROGRAMS AND POLICIES TO SUPPORT DIVERSE FAMILY CAREGIVERS

Overview: Research, Programs and Policies to Support Diverse Family Caregivers

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More than 56 million family caregivers, representing one in five households, provided unpaid care to a family member in the last year. This number is expected grow along with the increasing older adult population (over 65 years) with chronic and serious illness and their concomitant needs for complex care.

Consistent with overall US demographic trends, the family caregiver population is also becoming increasingly racially and ethnically diverse. Importantly, the demands, availability of resources and resulting outcomes of family caregiving are shaped by the unique social and environmental contexts in which caregiving occurs and the particular demands associated with the condition of the care recipient. Cultural expectations around caregiving may influence demands and role perceptions. For example, filial responsibility is shown to predict caregivers' perception of the severity of their parent's medical condition, the degree of medical assistance needed by the parent, and the likelihood of hiring a health care advocate, in some racial and ethnic groups but not in others. In 2021, California adopted a Master Plan on Aging to advance a California for All Ages and Ability, including investments in strategies to strengthen community-based supports for caregivers. Three caregiver initiatives are improving caregiver resource centers, adult day programs, and developing an equity plan for caregivers.
This symposium highlights ongoing efforts in California to address the needs of the states' diverse family caregiver population, with a focus on recent research, programs, policies, supports and recommendations. The first paper uses mixed methods including a survey and qualitative interviews with diverse caregivers about their experiences, demands, and resources. This work provides an important foundation to inform research, program and policy solutions for caregiver support. The second paper uses qualitative methods to explore experiences of caregiving and home care support needs among caregivers of persons with Amyotrophic Lateral Sclerosis (ALS), a condition requiring intense and complex care over time. The third presentation employs mixed methods to understand the impact of adulty day care services from the perspectives of persons with dementia, their family caregivers and service providers. The final presentation describes an ongoing initiative to develop a caregiving equity plan for the State of California, drawing in part on assessment of diverse caregivers throughout the California Caregiver Resource Center (CRC) network to examine caregiving demands, resources and outcomes by caregiver age, race/ethnicity, socioeconomic status and rurality.

This symposium session will be of interest to nurses and health professionals interested in research, clinical practice, and policy approaches to assess and support diverse family caregivers providing care for the growing population of older adults with chronic conditions.

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RESEARCH, PROGRAMS AND POLICIES TO SUPPORT DIVERSE FAMILY CAREGIVERS

Caregiver Experiences with Community Resources

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Aim: To describe caregiver experiences with services from the state-wide California Caregiver Resource Centers (CCRCs) and the impact on their lives.

Background: Family caregiving for an older adult or a person with disabilities is a common experience, with about one in five households engaged in this vital support. In California, 4.7 million family caregivers assist individuals over the age of 18, providing an estimated $63 billion worth of unpaid care each year. California established eleven CCRCs in 1984 and in 2019 enhanced funding to scale services and implement CareNav™, an online platform.

Methods: To evaluate the impact of these investments on caregiver experience, we used mixed methods, including a satisfaction survey and focused interviews. The survey assessed satisfaction with services, knowledge and confidence in caregiving, caregiver stress, and experiences with the technology on a five-point Likert scale. We conducted focused interviews with 28 diverse caregivers across the state, asking about their experiences as caregivers, interactions with the CCRC, what has been helpful, their impressions of CareNav™, and ideas for improvement. We use descriptive statistics for quantitative data and qualitative descriptive methods for interview transcripts and survey comments.

Results: From the survey, caregivers (n=2,229) were highly satisfied with CCRC services (79% extremely satisfied; 14% somewhat satisfied). The vast majority (94%) would recommend the services to others. With mean scores over 4 on a scale of 1-5, caregivers were more confident, felt better able to manage care, had more knowledge about caregiving, and were taking better care of themselves. Approximately 25% used the online platform and 83% were satisfied, using the platform to complete assessments, access services, communicate and get information. The interviews and comments identified the most important services, including family consultation, respite, support groups, education, counseling, equipment/supplies and legal and financial consultation. The impacts of services were profound, as caregivers felt less alone, better able to provide care and also care for self, and more ready to face the future. They reported lower stress and improved relationships with the care recipient. Because funding is limited, availability of respite, counseling and legal consultation is insufficient for the need. Access, both geographic and linguistic, poses an equity issue in delivery.

Conclusion: The CCRC services and support are vital to caregiver ability to manage care and stay healthy in the process. The benefits include improved mental health, increased capacity to provide care, and access to services that promote effective decision-making and provide respite. The relationship with the family consultant is key, as these staff develop a personal connection and can guide caregivers across the trajectory of their caring. Services such as respite, counseling and legal/financial consultation are important, but not fully available. Advocacy and increasing awareness of services are essential to achieve equity and support caregivers in their service to their families and to society.

Funding: CA Dept of Aging (CT-2223-15)

RESEARCH, PROGRAMS AND POLICIES TO SUPPORT
DIVERSE FAMILY CAREGIVERS

Managing Health at Home: Perspectives of Persons with ALS and Their Caregivers

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Aim: To identify the needs of persons with amyotrophic lateral sclerosis (ALS) and their caregivers in managing health at home, to inform policy and practice.
Background: On average around 5,000 people are diagnosed with ALS in the US each year, with an estimated 30,000 people currently living with ALS. Most people with ALS live at home, with family caregivers providing increasingly intense and complex care as the disease progresses. To maximize the physical, social and emotional health of persons living with ALS and their caregivers, appropriate resources and supports are needed. The literature suggests limited anticipatory guidance and persistent unmet needs. This study explored perspectives of needs from persons living with ALS, family caregivers, and healthcare professionals involved in their care.
Methods: We used a qualitative, descriptive, cross-sectional study design. The convenience sample included 43 participants from across the US: 7 persons living with ALS, 14 caregivers, and 23 health professionals. We conducted semi-structured Zoom interviews and focus groups in February and March of 2023, and used a short survey to collect sociodemographic and health information. Survey data was summarized with descriptive statistics. Interviews were recorded and transcribed verbatim, then inductively coded by a team of researchers, with themes identified. We ensured analytical trustworthiness through co-coding and peer debriefing, iterative refinement of the coding scheme, and an audit trail.
Results: Analysis identified several themes: anticipation of future needs to support timely provision of services; navigation and coordination to increase access to necessary services; and variable sufficiency of services or resources. Current services are often fragmented and many families face challenges identifying and accessing needed care and resources. We identified multilevel factors that influenced how needs were met, including dyadic characteristics, social determinants, community and health systems characteristics and societal influences. Findings suggest there is a need to increase the timely assessment and reassessment of persons living with ALS to identify and anticipate needs. Major challenges included lack of coordination between home, healthcare and social services, affordability and eligibility, adapting the home environment for care, and the impact on caregivers and families. People living in rural areas were particularly disadvantaged by lack of access to specialized clinicians, services and resources.
Implications: The rapid and complex health trajectory for persons living with ALS requires flexible, responsive care. This study highlights opportunities to better support caregivers and increase the quality of life for persons living with ALS. Policy recommendations include optimizing insurance coverage for services and equipment and addressing bureaucratic barriers to approvals to increase sufficiency of services. Development of clinical guidelines could influence policy, and enhance healthcare professional knowledge and skills, potentially reducing disparities in care between rural and urban areas. Improved navigation and coordination between primary care, specialty services and community resources could increase access to services and reduce caregiver burden. Addressing the mental health of caregivers is another key area for action in practice and policy. As case managers and leaders of home care teams. nurses are uniquely positioned to contribute to these efforts through assessment, care coordination and advocacy.

RESEARCH, PROGRAMS AND POLICIES TO SUPPORT DIVERSE FAMILY CAREGIVERS

Developing a Caregiver Equity Plan for the State of California

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In June 2019, Governor Newsom's Executive Order N-14-19 called for the development of the Master Plan for Aging (MPA) to prepare the state for demographic changes that will impact communities, families and individuals of all ages and abilities. Supporting caregivers is a key goal of the MPA Goal 4 "Caregiving that Works." As the population ages, family caregivers play a key role in ensuring older adults and people with disabilities can remain at home and avoid institutionalization. Yet, family caregivers face high stress and social isolation with fewer supports for their own care, as well as restricted access to community services for care recipients outside of the home.

To address the needs of diverse family caregivers, the MPA includes development of a Statewide Caregiver Equity Plan. This session will provide an overview of California's efforts to build a caregiving roadmap reaching all caregivers, focusing on those from underserved communities including Black, Latino, Indigenous, Asian/Pacific Islander, and LGBTQ+ caregivers, rural/urban dwellers, as well as Californians with the greatest economic and social needs. Drawing on rich assessment data collected in the online platform CareNav^{TM} by the eleven CCRCs, our evaluation finds that almost half of current clients served by California's Caregiver Resource Centers (CCRCs) identify as Black non-Hispanic, Hispanic/Latino, Asian American/Pacific Islander, Native American/Alaska Native or multi-racial/other. Importantly, we also find unequal distribution of caregiving demands, resources and outcomes.
Older caregivers, and those with low income, are more likely to provide 40 or more hours of care in the home each week and older caregivers more likely to provide high intensity care as measured with the number of activities of daily living (ADLs) and instrument ADLs supported as well as hours of care. Younger caregivers, those who identify in racial and ethnic groups other than White non-Hispanic and those with low income are more likely to perform medical or nursing tasks in the home, often without adequate preparation or support. These groups of caregivers providing complex and intense care are also the least likely to have paid or unpaid help to support the role and the most likely to report adverse outcomes including fair or poor health status, worsening health status and moderate or severe depression based on the PHQ-9. We have assembled a diverse advisory council to use data to make recommendations for further analysis, targeted programming, language access and cultural competency interventions and services aimed to address these inequities. This session includes an overview of California's caregiver support network, data on emerging needs and the process for a path forward through development of a caregiver equity roadmap and strategy. The overarching goal of this effort is to assure that all family caregivers have a range of high-quality services and supports that promote their physical, emotional, and financial well-being at home and in the workplace.

Funding: CA Department of Aging (CT-2223-98)

RESEARCH, PROGRAMS AND POLICIES TO SUPPORT DIVERSE FAMILY CAREGIVERS

Implementation of California Community Program for Adult Day Services Pilot

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Aim: To describe improvement priorities and expected outcomes of the California Community Program for Alzheimer's Services and Supports (Cal-COMPASS) Adult Day Services Enrichment Pilot in the seven Adult Day Programs (ADPs) and Adult Day Health Care (ADHC) centers.

Background: Adult day services are intended to help people with disabilities or cognitive impairment stay active, expand socialization and prevent decline of their abilities, while also providing respite for caregivers. Some programs offer specialized services to support persons with dementia to function at their highest possible level. The California Department of Aging (CDA) funded seven licensed ADP and ADHC centers in the 14-month Cal-COMPASS Pilot Program. The overall goals of the Cal-COMPASS program are to increase capacity for providing dementia-capable services and person-centered support for persons living with Alzheimer's Disease and Related Dementias (ADRD), preventing institutionalization and advancing health equity. Funding enhanced individual organizations' capacity and created a collaborative statewide learning community with five workgroups, each addressing a vital aspect of sustained improvement.

Methods: To evaluate the pilot, we used a qualitative descriptive design. Participants included staff and leaders from the organizations representing diverse sizes, service variability, operation patterns and experience. Data sources included twelve 45-60 minute Zoom semi-structured focus groups with staff and leadership of the participating organizations and quarterly reports from participating organizations. We conducted focus groups with each participating organization and the five learning community workgroups. The interviews elicited perspectives on Cal-COMPASS goals early progress toward achievement, expected impact, and measures of success. The participants were also asked to reflect on the workgroup goals, progress, challenges and opportunities and the ways the Cal-COMPASS program can support collaboration, diversity, equity, and inclusion. We included data from quarterly reports on organization-level goal progress and contributions to the learning community as narrative data in our analysis. The data were collected from November 2022 to June 2023. Qualitative descriptive methods and established processes to assure trustworthiness were used for the analysis.

Results: Three ADPs, four ADHC centers and CDA leadership established a learning community with five workgroups focused on critical operational elements. Organizations focused on: enhancing outreach efforts; expanding organizational capacity to serve, expanding services and resources for diverse communities, and evaluating quality improvement and program outcomes. Barriers for organizations included funding instability, short staffing, the digital divide and client hesitancy to enroll post-pandemic. To increase equity, they prioritized improving board representation to reflect their communities and deepening community partnerships. Participants viewed the learning community as an opportunity to benefit from their collective knowledge, and engaged in developing standardized practices, strategies for outreach, and sustainability, as well as infrastructure for advocacy, increased resources, and improvement of services.

Conclusion: The study identified core features of a statewide learning community integrating adult day services programs. The results suggest a feasible model to develop a standardized community-based care model for persons with ADRD. Future longitudinal studies should explore long-term implementation outcomes (e.g., sustainment and adoption) and the impact of organization- and community-level activities on the growing population of persons with ADRD and their caregivers.

Funding: CA Department of Aging (CT-2223-15)

USING QUALITATIVE INQUIRY TO ADVANCE EDUCATION, RESEARCH, AND PRACTICE TRANSFORMATION

Overview: Qualitative Inquiry to Advance Education, Research, and Practice Transformation

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Purpose: To describe four innovative research studies that utilized different qualitative research approaches focused on advancing health equity for diverse study populations situated in different environmental and social climates.

Background: Qualitative methodologies have been used extensively in nursing research. Yet, the knowledge and skills in understanding the distinctions between these methodologies are lacking in nursing education, research, and practice. There are gaps in the application of the *what*, *why*, and *how* of these approaches to qualitative methods that can lead to confusion around the chosen method and approaches when conducting qualitative research.

Methods: Each panelist will present their qualitative method to their individual studies. They will describe how health equity and social justice informed their methodological approach.

Results: First, a discussion of *Narrative Analysis* using *Reissman's Thematic Narrative* approach is presented to study the influences of animal-assisted interventions with canine and feline pen pals in youth with life-threatening conditions. Building on the experiences of adolescents, the second presenter will describe the use of a *Case Study* approach as part of a mixed methods study of optimizing adolescent mental health treatment using the health equity implementation framework. Then, a third presenter will describe the *Qualitative Content Analysis* approach by *Krippendorff* that was used to illustrate the meaning of obstetric violence in the US maternity care system. The fourth presentation will discuss how a *Critical Ethnographic* approach gives insight into perceptions held by rural participants of the relationship between rural health and state and national health policy. Finally, the different approaches will be compared to bridge the connections among the *what, why,* and *how*.

Implications: Following the 2024 WIN conference's focus on environmental and social climates, each abstract highlights four distinct qualitative methodologies and how these individual studies impacted health and equity in diverse contexts. These qualitative approaches are well suited to advance nurse-led research, education, and practice.

Virtual Animal-Assisted Intervention for Youth with Cancer: A Narrative Analysis

Anne Ingalls Gillespie*, PhD, RN, Loretto Heights School of Nursing, Regis University, Denver, CO*

Purpose: Youth and Pet Survivors (YAPS) is a novel form of virtual animal-assisted intervention (AAI) for youth with life-threatening conditions (LTC). YAPS is a letter writing intervention with dog and cat pen pals who share a LTC.The purpose of this presentation is to review the use of narrative analysis as a qualitative method guided by Riessman's thematic narrative analysis approach to discern how writing with a dog or cat pen pal with a shared diagnosis influences experiences of living with a LTC, and how the human-animal bond is expressed in letter narratives.

Description of Methodology: Riessman's thematic narrative analysis approach was used to analyze a selected set of 157 YAPS letter narratives written by 16 children and adolescents. Additionally, a conceptual framework for virtual AAI research was designed prior to conducting the narrative analysis. The conceptual framework emphasizes the relationships between AAI with pen pals, the HAB, emotional social support, and perceived QOL and served as a guide in the analysis.

Logic Linking Method to Research and Practice: Riessman's approach focuses on intention and language- how and why incidents are storied, not simply the content to which language refers. This approach allows for significant findings to be generated by focusing on what is written in personal narratives, guided by pre-determined concepts to serve as a resource for interpretation of the written narratives. In other words, prior concepts guide the inquiry, and at the same time, the researcher may search for novel theoretical insights from the data. Riessman also highlights the importance of the influence of the audience for whom the letter was written, and for what purpose; in this case, the influence of the animal pen pal. In this way, Riessman's approach to thematic narrative analysis is both deductive and inductive in nature and is a method well suited for analyzing narratives within letters. This approach also enabled the researcher to highlight the health equity related to children and adolescents living with an LTC who are traditionally barred from certain therapies with canines and felines because of infectious disease precautions.

Conclusion: Guided by Riessman's immersive, multi-dimensional thematic narrative analysis approach and the unique conceptual framework integrating the concepts of QOL, emotional social support and the HAB, the themes and subthemes embedded in the language of the co-created stories of the HAB provided answers to how letter writing with a canine or feline pen pal with a shared diagnosis influences experiences of living with an LTC. Riessman's thematic narrative analysis approach with the rich naturalistic data set of letter narratives in temporal sequence allowed for a rare glimpse into the lived experiences of youth with a LTC in ways that transcend other means of capturing these experiences. This study supports innovation in nursing practice and research and adds a conceptual framework and scientific evidence to the emerging field of virtual AAI as an effective nurse-led palliative care intervention for this vulnerable population across the illness trajectory.

Optimizing Adolescent Mental Health Treatment Using a Case Study Design

***Mia Roberts**, PhD, CPNP-PC, College of Nursing, University of Colorado Anschutz, Aurora, CO*

Purpose: Adolescents experience high rates of mental health disorders with low treatment rates and increased health disparities. The purpose of this presentation is to review the use of a case study research design, guided by the Health Equity Implementation Framework (HEIF), to evaluate the use of the warm handoff (WH), the in the moment transfer of services from primary care to behavioral health when a mental health issue is identified in adolescents. This case study included a convergent mixed methods approach. Semi-structured interview questions were guided by the HEIF. Qualitative analysis included an inductive analysis using interpretive description and a subsequent deductive analysis, guided by the domains of the HEIF.

Description of Methodology: A case study research design attempts to generate knowledge regarding a complex issue within the context in which it resides. To understand the case (or intervention), the research may include multiple sources of evidence, both quantitative and qualitative. The HEIF is a theoretical framework to address health equity in implementation science. This framework aims to systematically assess and understand the factors (or determinants) associated with success of an intervention from the lens of health equity. It proposes that these determinants are grouped under domains that may be measured and/or used to identify and clarify barriers or facilitators to the delivery of an intervention. Domains include culturally relevant factors of recipients, the clinical encounter, societal context, and the innovation (or intervention) itself. By acknowledging these factors, an intervention may be more successfully implemented and therefore improve health equity.

Logic Linking Method to Practice and Research: Previous studies of the WH are limited, conflicting, and utilized differing clinical structures. Using a case study research design, the WH was able to be clarified and defined. Moreover, the HEIF provided a comprehensive approach to examine how the warm handoff is provided and experienced, in addition to focusing on the individual, systemic, and societal influences to improve health equity.

Conclusion: The results from this case study design are the first of its kind to explicitly describe the components of the WH and to evaluate the use of the WH in adolescents. By utilizing this approach, the convergence of the qualitative and quantitative findings provided a rich, holistic description of the intervention. Using the HEIF identified how the WH is used with adolescents and how it may be supported to optimize both the delivery and the receipt of this intervention from the lens of health equity.

Qualitative Content Analysis to Illustrate the Meaning of Obstetric Violence

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Purposes/Aims: The aims of this methodological presentation are to: 1) increase the understanding of how Krippendorff's qualitative content analysis can be used to find meaning in sensitive or traumatic areas of research, 2) discuss quality issues for producing a trustworthy qualitative content analysis, and 3) highlight a nurse-driven theoretical framework that advances social justice and was used in the exemplar study. The purpose of the exemplar study was to use Krippendorff's method of qualitative content analysis to illustrate the meaning of obstetric violence in the US maternity care system using the textual data from a naturally occurring sample of participants from the Break the Silence social media campaign.

Description of Method: The network of steps needed for qualitative content analysis to proceed from a body of textual data to results was followed according to Krippendorff. Additional measures were taken to not misuse the power and control embedded in the research process and avoid taking the preexisting online data out of context and misrepresenting it. In vivo coding was used to center the voices of participants. Plus, this type of verbatim coding has been recognized as more likely to lead to understanding the meaning of people's experiences. In addition, the complementary approach from using abductive inference allowed for movement back and forth between inductive and deductive approaches. This approach was used to comprehensively cover the data and fully understand the meaning of obstetric violence in the exemplar study. Abductive inference is central to meaning making in qualitative content analysis, and the levels of abstraction and degrees of interpretation were kept consistent in the exemplar study.

Logic Linking Method to Research: The reason for researchers to engage in qualitative content analysis is to recognize meanings. Qualitative content analysis prioritizes the intent for participants' voices to be heard, and it has been recognized as a well-suited method to analyze complicated and sensitive phenomena in nursing. Another advantage to qualitative content analysis is that it can handle unstructured matter as data, which makes the method well suited for examining the meaning of how people experience questions of interest nested in the complexities of the real world. Furthermore, the exemplar study used the theory of social justice in nursing as a framework compatible with healthcare problems involving inequitable outcomes, intersectional disadvantages, and a violation of human rights.

Conclusion: The exemplar study used to discuss qualitative content analysis as a method to find the meaning of sensitive or traumatic phenomena offers an additional opportunity to increase the understanding of issues with the method that can contribute to producing high-quality, trustworthy studies. There are additional opportunities to see how the theory of social justice in nursing can be used as a theoretical framework that anchors research to the discipline of nursing with the goals of transformational learning and action that are meant to be implemented across transdisciplinary areas of research, education, practice, and policy.

Using Critical Ethnography to Explore Rural Perception of Health and Health Policy

***Melissa Florell**, PhD, RN, College of Nursing, University of Nebraska Medical Center, Kearney, NE*

Purpose: This presentation will describe how a *critical ethnographic* approach gives insight into perceptions held by rural people of the relationship between rural health and state and national health policy. This exemplar study will also demonstrate how qualitative research methods can be used to investigate circumstances of health inequity. Critical ethnography is the application of critical theory to overcome power structures that create or intensify social oppression. Exploration of health systems problems such as rural health inequities using critical ethnography is appropriate due to the well-documented marginalization of rural people in terms of health outcomes and access.

Description of Methodology: The aim of critical ethnography is to challenge and change existing power structures through advocacy and policy. For this study, the primary researcher modified the approaches of Carspecken, Thomas, and Madison, three contemporary critical ethnographers to create a research methodology that could be applied to address existing rural health inequities. Each of these researchers stress the positionality of the researcher as active, rather than passive, with the goal of the research as creating change rather than a cultural description. A critical approach prioritizes equality and freedom from all forms of oppression. Criticalists find contemporary society, including power structures such as governments, subtly and overtly unfair; needing to be challenged and reconstructed with social justice and equality as primary considerations. Critical epistemology does not require or prioritize research that is unbiased or neutral. Instead, researchers must recognize and evaluate the relationships between power, thought, and truth. The purpose of the evaluation is the pursuit of social justice and equality.

Logic Linking Method to Research and Practice: Learning how rural People are impacted by state and national health policy is consistent with the ontological assumptions of critical ethnography. Ontological consistency is an important consideration for research design and execution, as it provides the lens through which the data will be interpreted. In critical ethnography, the ontological assumption is that there are unseen forces that create or perpetuate social inequities such as those that disadvantage rural people. This study used a critical ethnographic approach and triangulated study design to explore how residents of three rural communities perceived the relationship between upstream health policy decisions and rural health inequities experienced within their communities.

Conclusion: Participants shared the common goals of maintaining and improving access to healthcare services. Primary themes identified were the importance of community; that rural people and nurses have varied perceptions of what health policy is but similar views of what it should do, which is to support vibrant rural communities including local access to health care and efforts to address Nebraska’s mental health crisis; and finally, most participants believe that practical, stakeholder-driven health policy address barriers to health. Considering these themes through the lens of critical ethnography and its goal of using the political process to address inequities, there is an opportunity for the development of health policy framed as improving community resources for health promotion and establishing health access for all.

ABSTRACTS OF PODIUM PRESENTATIONS

ADOLESCENT AND YOUNG ADULT HEALTH

Adolescents and Young Adults Transitioning to Adult Healthcare

***Mary Wingert**, BSN, RN, CPN, Neurological Surgery, Seattle Children’s Hospital, Seattle, WA*

Purposes/Aims: To assess if a standard guideline of care, tools in the electronic medical record, and a nurse-led telemedicine clinic were effective in implementing a sustainable healthcare transition (HCT) process for adolescents and young adults seen in the neurosurgery clinic at a freestanding children’s hospital.

Rationale/Background: Approximately 500,000 adolescents and young adults transition from pediatric to adult health care annually. Studies have shown improved health outcomes with a structured HCT process like Got Transition’s Six Core Elements, endorsed by the American Academy of Pediatrics, American College of Physicians, and American Academy of Family Physicians. Still, healthcare providers struggle to incorporate transition education and support into standard practice and preparation can vary based on the patient’s race, household language, income, and gender.

Methods: Using a prospective quality improvement approach, a structured healthcare transition process, modeled on the Six Core Elements, was developed and implemented during a 12-month pilot. Patients 14 and older who were seen by neurosurgery in an outpatient setting at Seattle Children’s Hospital received standardized HCT interventions utilizing the electronic medical record (EMR). Before the pilot began, a lunch and learn was held for staff education and a guideline of care document was distributed. A nurse-led telemedicine clinic was implemented and staff were encouraged to refer patients who needed additional transition preparation. Before and after the pilot, staff were surveyed to assess barriers and current practices. The implementation rates of the EMR tools were tracked by EPIC analytics and included:

1. A policy letter sent electronically by the EMR
2. A portable medical summary letter
3. Transition specific order set, including relevant referrals
4. Education to include on patient’s After Visit Summary
5. “SmartPhrase” for providers to document education and goal setting

Assessment of Findings/Outcomes Achieved: From August 2022 through July 2023, 407 unique patients met the inclusion criteria. Baseline data was gathered from the 2021 calendar year and included 339 patients. The percentage of visits where transition was mentioned in the EMR encounter increased from 26.4% to 33.2%. The transition policy letter was sent in MyChart to an average of 33 patients per month, with 62% of them opening it. Cumulatively, the four EMR tools were used 105 times. Survey results included:

1. A 58% decrease in staff identifying “lack of education” as a barrier
2. All staff responded that having a structured HCT process improved the quality and safety of care
3. The staff’s average assessment of the practice’s healthcare transition process increased from 7% to 83.6%

Conclusions: There was an increase in the number of visits where transition was discussed and a significant increase in the staff’s reported assessment of the current healthcare transition process. The EMR tools were utilized, but less than expected. Future interventions might include additional staff training and support or a best practice advisory built into the EMR. Using the EMR to send the transition policy letter proved a reliable way to distribute the information to patients and families.

Funding: Seattle Children’s Hospital Center for Pediatric Nursing Research Grant

Depression, Loneliness, and Physical Workload in Latino Farmworker Adolescents

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Aims: To assess the degree to which depressive symptoms is associated with loneliness and physical workload among Latino Farmworker Adolescents and Young Adults in Arizona.
Background: Latino farmworker adolescents and young adults (LFW-AYA) ages 14 to 24 years old account for 14% of the farmworker labor force in the United States (U.S.) (Gold et al., 2022). Although LFW-AYA account for a relatively small proportion of the hired farmworker population in the U.S., they are a particularly vulnerable subgroup of migrant and seasonal farmworkers (McLaurin & Liebman, 2012). Specifically, they confront occupational hazards, limited to no training experience, including social isolation, loneliness, and poor mental health (Carlos Chavez et al., 2021). Although research has focused on musculoskeletal discomfort, work injuries and illnesses negatively affect LFW-AYA's physical health (Arcury et al., 2021; Quandt et al., 2021), there is limited information about the mental health effects of physical workload and loneliness among LFW-AYA. Guided by an ambivalence framework (Merton & Barber, 1963; Weigert, 1991), we addressed the following hypothesis in our study:
H1: Loneliness and physical workload will be associated with depressive symptoms.
H2: There will be a difference in depressive symptoms based on LFW-AYA age group (i.e., younger than 20 years old, older than 21 years old).
Assessment of Findings: After controlling for age, only loneliness (*b*= .58, *p*< .01) was a predictor of depressive symptoms. An independent sample t-test showed that depressive symptoms among LFW-AYA age group 21—25 years old [M=34.90 (SD=9.72)] were significantly higher than among age group 16—20 [M=30.11 (SD=5.36)], with a difference of -4.80, *t*(96)= -2.97, *SE*=1.62, *p*<0.01,
Conclusions and Implications for Clinical or Educational Practice: Loneliness and physical workload for LFW-AYA are associated with depressive symptoms. Although young workers may experience loneliness by being away from their families in order to provide for them, they continue to work in agriculture, taking on intense physical workload while experiencing depressive symptoms. Data collection is underway to confirm these findings across a final sample of N=180.
Recommendations for Future Undertakings: Future work needs to focus on assessing LFW-AYA's emotional ambivalence where family financial responsibility may encourage these young workers to take on more work to increase their income while neglecting their own health. Nurses need to assess family financial dependency among workers to identify those potentially at risk for experiencing depressive symptoms while working in U.S. agriculture.

ADOLESCENT AND YOUNG ADULT HEALTH

Enhancing Suicide Prevention Training: Student Perspectives

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Background: Suicide remains a leading cause of death among adolescents in the United States, and instances of death by suicide continue to increase in this population. During the COVID-19 pandemic, these numbers rose further, and there were significantly higher numbers of death by suicide among certain racial and ethnic minority groups. To mitigate this public health crisis, equitable, effective, and accessible suicide prevention programming is critical; however, suicide prevention programming is often developed and implemented without input from the adolescents engaged in the training.

Purpose: The current study developed themes that emerged from student feedback as to how a school-based suicide prevention training, which was developed prior to COVID-19, and taught by either their peers or teachers, could be improved.

Methods: Data was collected from 2,481 adolescents who completed pre-training and post-training surveys between March 2022 and June 2023. Thematic analysis was used to explore participant responses to an open-ended question included in the post-training survey, which asked whether students had suggestions for improving the training.

Results: Findings indicate that students are interested in more interactive suicide prevention trainings, as well as those that place greater emphasis on maintaining one’s own mental and emotional wellbeing (self-care) both during and after suicide prevention training. Additionally, students seek to feel empowered with the tools, resources, knowledge, and skills necessary to feel confident in their ability to take action and make informed choices when assisting others in suicide prevention and crisis.

Conclusions/Implications: Implications for school-based suicide prevention training, particularly in the context of mental health nursing, are discussed. Future recommendations include suicide prevention trainings that entail more interaction and peer collaboration, as well as greater emphasis on practice scenarios and self-care strategies. These findings are relevant to nurses and their interactions with this demographic. Specifically, nurses are uniquely positioned to support adolescents in both applying and enhancing suicide prevention skills acquired in these training by promoting mental health awareness, connecting adolescents to resources, and facilitating early intervention.

Hope and Spirituality in Hispanic Adolescent and Young Adult Cancer Survivors

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Purpose: Describe the role of spirituality in a sample of Hispanic Adolescent and Young Adult (AYA) cancer survivors.

Background: Adolescents and young adults (AYAs) are in a critical state of emotional, social, and cognitive development. A cancer diagnosis disrupts this development and can contribute to uncertainty and significant existential distress which may persist during cancer survivorship.

Methods: This convergent parallel mixed-methods study aimed to explore participants' lived experiences with hope during cancer treatment and cancer survivorship. A purposive sample of Hispanic AYAs aged 18-39 years who completed cancer treatment 2-5 years ago were virtually recruited for participation. First, participants completed REDCap surveys about hope, demoralization, depression and anxiety, and health related quality of life. Second, participants completed virtual semi-structured interviews using the Relational Caring Inquiry as a data collection and analysis framework. Participants described their experiences with hope verbally and visually during cancer treatment and cancer survivorship by drawing pictures using the Paint 3D application. Participants narrated the meanings and temporal events in their drawings. Participants wrote narratives with assistance from the principal investigator about their experiences with hope during cancer treatment and cancer survivorship. Thematic analyses were iteratively performed across the data set to identify final themes.

Assessment of Findings: Ten Hispanic AYA cancer survivors aged 22-36 years old participated in this pilot study. Seven participants (70%) were female, and three participants (30%) were male. Six participants (60%) experienced non-hematologic malignancies, and four participants (40%) experienced hematologic malignancies. Eight participants (80%) preferred to participate using Spanish, while two (20%) preferred to participate using English. The theme *Finding Hope in* Religion, and subthemes *Divine* Faith, and *Spiritual Gratitude* emerged as concepts participants linked to their conceptualization of hope during cancer treatment and survivorship. Participants operationalized hope as faith: faith in situational resolution and faith in God. Participants reported learning spiritual lessons and rituals from their parents such as prayer, reading the bible, faith in God, and asking God for a miracle. Participants' drawings featured symbols of spirituality such as churches and crucifixes.

Conclusions: Hope and spirituality may be conceptually linked for Hispanic AYA cancer survivors. Our data suggests spirituality should be considered a vital construct for whole person-centered care during cancer treatment and survivorship care and therefore included in conversations about personal values. Hope through faith may be a learned spiritual value in Hispanic AYAs and might play a role in their spiritual and cognitive development. Exploration of the role of hope for AYA cancer survivors may help clinicians better understand their existential distress and provide them appropriate support. Further research is needed to explore the potentially protective value of hope and spirituality for the Hispanic AYA population.

Parental and Young Adult Perspectives on Genomic Tumor Profiling: A Qualitative Study

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Aims: To explore the perspectives of young adult patients and parents of children and adolescent patients with high-risk, recurrent, or rare cancer who were considering targeted therapy options identified by investigational genomic tumor profiling.

Background: Although clinical trials have improved the prognosis of childhood cancer in the last few decades many challenges remain, including low survival rates for those with high-risk or recurrent disease and long-term therapy-related toxicity that imperils survival and functional outcomes. In recent years, the recognition that diverse cancer types may share molecular alterations that can be therapeutically targeted has stimulated "precision medicine" in cancer care, where tumor DNA and RNA profiling are used to identify potential therapies for individual patients. The study was designed to understand how parents or patients view investigational precision medicine approaches in the context of other available therapy options.

Methods: In this qualitative study, we conducted semi-structured interviews with patients and parents following enrollment on a registry study where information from both a standard-of-care DNA sequencing panel and an investigational comparative RNA sequencing analysis were evaluated to identify and prioritize potential targeted therapy options for patients with recurrent/relapsed or rare cancer for which there was no curative therapy. Interviews were conducted after the oncologist reviewed the results with patients/family members and focused on their understanding of the cancer, likelihood of cure, available treatment options, understanding of genomic profiling technologies, and their desired role(s) in therapeutic decision making. Thematic analysis of the transcriptions was conducted using an inductive approach.

Assessment of Findings: Eleven parents (9 mothers and 2 fathers) and six young adult patients (all males) from a single, quaternary center were interviewed. The average age for the parents was 45 years (the average age of their child was 12 years) and for the young adult was 21 years. Six major themes were identified: (1) Partnerships in Decision Making, (2) Prioritizing Quality of Life, (3) Prognostic Communication; (4) Contingency Planning, (5) Openness and Trust with Provider and Research and (6) Keeping Hope. There was a wide range of understanding of tumor genetic profiling among participants. Parents and young adults reported how they were involved in cancer treatment decision making, with the majority seeking advice or partnership in decision-making from their oncologist and their family. Both parents and young adults considered the toxicity of treatment when making treatment decisions; they weighed the overall side effects and what they valued most. Participants described having potential treatment options like having a contingency plan. Hope was both internally and externally supported by possible treatment options in the future.

Conclusions: Our findings suggest a shift to prioritizing quality of life when patients and parents of children with cancer are facing a poor prognosis and treatment options are limited. Investigative genomic testing helped maintain hope for participants. Engaging young adults and parents in shared decision-making and meeting their information needs are important and require further investigation as the science advances in treating patients with precision medicine therapies for pediatric cancers.

Funding: This study was partially funded by the California Initiative to Advance Precision Medicine and Lucile Packard Children's Hospital.

ADVANCED PRACTICE AND ACUTE CARE

Comparison of GCS, FOUR and Sofa Score on Functional Outcome of Critically Ill Patients

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Background: The level of consciousness during the first 24 hours of admission is fundamental and contingent to the prediction of the outcome. Many tools are commonly used in the prognostication of the outcome as mortality and morbidity in ICU's and among the neurologically impaired patients. The aim of the study is to compare the Glasgow coma scale (GCS), Full outline of Unresponsiveness (FOUR) and Sequential Organ Failure Assessment (SOFA) Score in predicting the functional outcome of the patients.
Methodology: In the current observational and prospective study, 71 patients above the age of 18 years admitted with a GCS score of less than 14 at intensive care units and high dependency units of neurology department were enrolled. The demographic variables, the FOUR, and SOFA score were recorded on the day of admission. The outcome was measured using the Glasgow outcome tool on day of discharge. For statistical analysis, cross tabulation, receiver operating curve, the Hosmer-Lemeshow goodness of fit test and logistic regression were used at CI of 95%.
Results: The median age was 57 years (IQ, 37-66) and with 63.3% of male patients. The GCS, FOUR and SOFA scores between the patients with favorable and unfavorable outcome was significant ($p = 0.001$, $p < 0.001$). While the discriminating power for FOUR score and GCS was excellent (area under ROC [AUC] curve: 91.1%; standard error [SE]: 0.025, 85.5% [SE: 0.037 respectively). In addition, FOUR displayed better specificity (77%) and accuracy (98%) as compared with the GCS score (68% and 95%). While the AUC score was not significant for SOFA score. The logistic regression for GCS, FOUR and SOFA was significant ($p=0.002$, $p<0.001$) and the Hosmer-Lemeshow goodness of fit test (2(8, N = 71) = 0.293, p >. 05 which explains that the scales used for assessment are well predicting to the outcome.
The Pearson Chi-Square & Fisher's Exact Test analyzed using the cross tabulation shows that the association between the variables are significant for GCS, FOUR and SOFA ($p=0.001$, $p<0.05$). The regression values shows significance ($R=0.923$ & $R^2= .852$)
Conclusions/Clinical Relevance: The assessment tools GCS, FOUR and SOFA scores are good predictors to favorable and unfavorable outcome while FOUR score tool is considered to be better predictor amongst the above tools. Accurate monitoring of the neurological status is very vital and GCS has been the commonest utilized tool since its inception in 1975. The nursing profession is based on Evidenced based practice and this study urges the importance of being rigor and current in our practice. Hence, it is important to teach our students and nurses on the importance of FOUR score which can be used among all types of coma. The use of this tool can help to grade the coma, identify complications or deterioration in the neurological status of the patient and proactively initiate nursing interventions and decrease mortality and morbidity.

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The Effect of SES on Pediatric Heart Transplant Outcomes at a Single Center- 2013-2022

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Purpose: The primary aim of this study was to investigate the contemporary associations between socioeconomic status (SES) and pediatric heart transplant outcomes at a single pediatric heart center. A comprehensive understanding of the impact of SES on pediatric heart transplant outcomes remains crucial for developing targeted interventions to mitigate disparities and improve long-term patient outcomes.

Background: Over the last few decades, with advances in technology, medicine and surgical techniques, there have been great improvements in outcomes in pediatric heart transplantation. However, previous studies have shown that these improved outcomes are not equal among all patient populations. For instance, a seminal study in the early 2000s found that pediatric heart transplant recipients from lower SES backgrounds faced increased risks of re-transplantation and graft failure. Poorer outcomes associated with lower SES have been observed across various transplantation procedures, including liver transplant and renal transplant. These previous studies underscore the critical importance of understanding the impact of SES on pediatric healthcare outcomes. However, the landscape of pediatric healthcare and transplant therapies has evolved since then, prompting the need for a contemporary reassessment of these associations. This study investigates the current relationship between SES and pediatric heart transplant outcomes, considering recent advancements in transplantation and increased public awareness of health disparities.

Methods: This retrospective chart review examined 176 pediatric patients who underwent their first orthotopic heart transplantation between 2013 and 2021 at a single center at Lucile Packard Children's Hospital, Stanford. The Area Deprivation Index (ADI), based on U.S. census data, was used to assess SES. Cox proportional hazards models and generalized linear models were employed to analyze the association between SES and graft failure, rejection rates, and hospitalization rates.

Assessment of Findings: Our analysis found no statistically significant differences in graft failure rates, rejection rates, or hospitalization rates between low-SES and high-SES pediatric heart transplant patients in our single-center study. Additionally, there were no significant disparities in the number of acute cellular rejections (ACR) within the first year post-transplant and the number of hospitalization days of all causes within the same time frame.

Conclusion: There may be patient education, policies and social resources that can help mitigate SES-based health care disparities in pediatric transplantation. Addressing the diverse mechanisms underlying health disparities requires a multifaceted approach. At our institution, several social service and nurse-driven interventions have been implemented to combat barriers faced by patients and families. These interventions include providing access to meal vouchers, transportation assistance, local housing support, language interpretation and tailored post-transplant family education. For future research, it is imperative to conduct multi-center studies with larger sample sizes to enhance the generalizability of findings. By examining the availability, accessibility, and effectiveness of these resources, researchers can develop strategies to ensure equitable post-transplant care for all patients, regardless of their socioeconomic background.

Fidelity of Novel Catfish Simulator in Suturing for Novice Advanced Practice Providers

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Background: The benefits of simulation on improving skills and confidence prior to human medical procedures is well documented. “Simulation fidelity”, is the “reality” of the training in transferring to the human procedure. Unfortunately, simulation of human tissues is imperfect, with low fidelity silicon trainers, fruits or “pig’s feet” (porcine tissue) being the most common simulation products. A novel biologic alternative is the scaleless catfish, which provides similar tissue elements to human skin in texture, layers, and skin depth. Catfish can be used for skin biopsy and wound closure/suturing, enhancing tissue fidelity as well as source access and affordability and provides a non-porcine simulator more culturally or religiously acceptable for some learners.

Purpose: To compare Advanced Practice Provider learner preferences between silicon simulators, porcine biologic tissue and scaleless catfish prepared for tissue simulation in dermatologic procedures and wound closure/suturing training as part of a nurse practitioner residency and fellowship program.

Methods: A best-practice simulation activity was developed, providing learners with simulation objectives, instructions, and pre-simulation training materials. Learners were an interprofessional cohort of nurse practitioner and physician assistant residents and fellows trained in dermatologic skills for skin biopsy and wound closure using silicon, porcine biologic tissue, and prepared catfish tissue simulators with the objective of enhancing novice clinician skills and confidence. The training session was 1.75 hours beginning with demonstration of dermatologic procedures by a School of Medicine (SOM) Simulation Fellow followed by 1:1 mentoring by 6 volunteer SOM and School of Nursing (SON) faculty/clinicians as residents and fellows practiced. Each participant completed a retrospective pre-post evaluation of their level of skill competence and confidence in completing the procedures and ranked fidelity of each simulator relative to human tissue. Additional qualitative data was obtained from open-ended questions. The catfish skin-on fillets were obtained from a local market, soaked in 70% isopropyl alcohol overnight, with introduction of lacerations for wound closure using sutures, chemical bond and adhesive strips.

Outcomes: Novice APPs participated and completed retrospective pre-post evaluations of their procedure skills and confidence levels following training on skin biopsy and wound closure using silicon, porcine, and prepared catfish simulators. Participants ranked on Likert scale (1=strongly disagree to 5=strongly agree) that catfish tissue was their preferred and best fidelity for human tissue simulation. Participants indicated on Likert scale (1=not at all confident to 4=very confident) increased confidence (pre – 2.36-2.86 and post – 3.21-3.71) in their skill and competence following the training. Results demonstrate participants somewhat and strongly agree with their level of satisfaction and somewhat and very confident in catfish biologic tissue elevating their skills and confidence in wound and suturing management.

Conclusions: Catfish biologic tissue provides high simulation fidelity for human dermatologic procedures over standard silicon non-biologic models and improved skill, confidence, and satisfaction of APP novice learners. The availability and affordability of catfish through grocery sources, with ease of preparation as a biologic simulator, may enhance novice and experienced APP dermatologic procedure practice. Further exploration of alcohol preservation and freezing may allow for the availability of a multi-use tissue simulator.

Innovation in the ED: Developing a Throughput Nurse to Improve Patient Flow

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Purpose and Significance: The project goal was to decrease patient length of stay (LOS) in the Emergency Department (ED) without negatively impacting staff satisfaction. Increased volume of patients seeking treatment at the Mayo Clinic Arizona ED each year mandated a hospital wide focus on optimizing patient throughput. Data validated ED monthly LOS were increasing. Anecdotally, staff reported delays related to communication with ancillary departments, consults, nurse screenings, and diagnostics. The project aim was to decrease arrival to discharge median LOS in the ED, by 5% from 244 minutes to 232 minutes by fourth quarter 2020. Complexities to the project success included an unforeseen pandemic, construction, and restricted space, resulting in an extension of our initial timeline to 2021. The TN role was specifically designed to incorporate a humanistic communication approach allowing for dialogue and improved listening skills. This individual was responsible for engaging all members of a care team in resolving delays. Multidisciplinary bottleneck resolution requires a strong facilitator or pivotal communicator who is agile and responsive. This process improvement was designed around the idea that improved communication would improve treatment delays.

Methods: EBP and DMAIC frameworks assisted in this project's successful, innovative process improvement: implementation of an ED TN Nurse. The TN roles and responsibilities were created and quality gaps in patient flow were identified. Three nurses, staffed as TNs worked 0900-2100, peak census times, seven days per week. TN staffing was financially supported by an internal grant.

Results/Evaluation: Monthly average ED LOS increased by 7 minutes from 2019 to 2021, staff satisfaction was not negatively impacted. It was hypothesized the increased LOS was influenced by ED patient volume (average monthly increase of 464 patients), construction, a national pandemic causing a pause in the TN role for 6 months, and hospital saturation levels. Prior to the pandemic, a 17.68-minute decrease in average monthly LOS was achieved. Learning it was difficult to evaluate the TNs impact on LOS, considering the multifactorial reasons contributing to this metric, additional data analysis revealed the TNs did improve other throughput metrics. The ED bed ready to patient depart decreased by 4 minutes and time from discharge disposition to patient depart decreased by 6 minutes. Another unanticipated result was the overwhelmingly positive impact on staff satisfaction. Literature cautioned, implementation of a TN could contribute to staff feeling micromanaged and devalued. In response, early engagement of stakeholders and careful selection of TNs with strong leadership qualities were prioritized. Post implementation surveys demonstrated an increase in staff satisfaction when mitigating delays and resolving flow bottlenecks. The TN has now become a permanent role in the ED.

Implications for Practice: Specialized TNs dedicated to the identification, documentation, and resolution of delays improves patient movement, workflow processes, communication, and staff satisfaction. Enhancing communication with physicians and ancillary departments positively impacts patient flow and interdisciplinary rapport. Although the initial aim to decrease ED LOS was not achieved, the TN role successfully impacted throughput metrics and created another opportunity for RN professional development.

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ECMO Education in Clinical Nurse Specialist Curriculum

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Purpose/Aims: This pilot study explored the effectiveness of implementing an experiential based Extra Corporeal Membrane Oxygenation (ECMO) training workshop in an Adult-Gerontology Clinical Nurse Specialist (CNS) curriculum. Effectiveness of the pilot program was measured by participant knowledge, skills, and attitudes. Research questions included: 1) Did CNS student participants retain the knowledge obtained during their ECMO education workshop (Knowledge); 2) Are CNS student participants confident to utilize the knowledge and skills obtained during their ECMO education workshop in practice (skills); and 3) Did CNS student participants perceive value in ECMO education within their CNS curriculum (attitude).

Background: The incidence of pulmonary failure and shortage of experienced ECMO staff during the COVID 19 pandemic brought the need for ECMO education to the forefront. ECMO therapy is technically complex, and historically managed by physician intensivists and perfusion technicians. Nonetheless, the nurse is caring for these patients around-the-clock, leading to the emerging role of the “ECMO Nurse Specialist”. CNS curriculum can blend didactic content and experiential learning to prepare the future CNS to engage in cross-disciplinary approaches to improve healthcare for ECMO patients with seamless continuity of care.

Methods: Pre/posttest design. Participants were CNS students who elected to attend an ECMO training workshop. This workshop was not part of their required coursework and participation was not graded. All participants (N=10) were provided with an online ECMO education module followed by an in-person training workshop consisting of theoretical and hands on simulated practical elements of ECMO management and troubleshooting. Participants completed a knowledge exam and survey addressing self-rated ECMO knowledge and skills prior to the online and in person training workshop and three months after the training workshop. Attitudes was assessed after the workshop. Data analysis included descriptive statistics and paired samples t-test.

Assessment of Findings: Knowledge of ECMO assessed by a 15-question pre-test/post-test exam was statistically significant 3 months after the workshop M = 75.33(12.59) compared to before the workshop M = 59.33(13.5), t (9) = 5.31, N=10, p = < .001. Self-rated ECMO knowledge using a 5-point Likert scale was statistically significant 3 months after the workshop M = 2.6(.90) compared to before the workshop M = 1.4(.70), t (9) = 4.81, N=10, p = < .001. Self-rated confidence in applying ECMO skills at the bedside using a 5-point Likert scale was statistically significant 3 months after the workshop M = 2.5(.97) as compared to before the workshop M = 1.3(.68), t (9) = 3.67, N=10, p = .005. Attitudes of ECMO education in CNS curriculum had a mean rating of 4.7 (SD=.97).

Conclusion: Nurses are an integral part of ECMO management. This pilot study provided preliminary data to support CNS students receiving ECMO-specific education during their program of study, thus preparing them for the increasing demand for ECMO therapy and the emerging role of the “ECMO Nurse Specialist”. A precepted clinical element including rounding on actual ECMO patients will be added to the workshop with the goal of increasing confidence in applying learned ECMO skills.

Early Career Nurse Practitioners and Rural Healthcare Practice: An Integrative Review

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Purpose: This integrative review aimed to determine the state of science regarding Nurse Practitioners' (NPs') early career experiences in rural healthcare practice.

Background: The ongoing maldistribution of primary healthcare providers and increasing proportion of older adults in the United States will escalate the insufficiency of primary care services available to rural populations in the coming decade. Inequitable access to healthcare, amplified by provider turnover, is costly, exacerbating treatment delays and interrupting the continuity and quality of healthcare services.

NPs represent 25% of the rural primary care workforce and are the fastest-growing sector of primary care providers. However, they experience turnover rates nearly twice that of physicians. Effective recruitment and retention strategies are a priority to sustain a stable rural healthcare workforce, but a clear understanding of the experiences of new NPs in this setting is necessary to synthesize scientific knowledge toward supporting the NP workforce.

Methods: Whittemore and Knafl's framework was used. Several databases (e.g., CINAHL, Embase, PubMed, Web of Science) were searched using various combinations of terms: "new graduate" or "early career" and similar terms, "nurse practitioner" and similar terms," "rural," "remote," "frontier," "experiences," "adapting," "adjusting," "belonging," "integrating," "retention," "burnout," and "turnover." No time delimitation was applied, and it included empirical and theoretical literature, available in full text and published in English. There were 172 articles retrieved; only five were specific to new NPs' experiences practicing primary care in the rural United States. Three reviewers independently appraised the articles for relevant findings, which were distilled and matrixed. Commonalities were identified in an iterative process, and thematic elements were synthesized then clustered into categories. The reviewers adhered to the Preferred Reporting Items for Systematic Reviews and Meta-analysis, adapted for this integrative review to inform selection, review, and reporting processes.

Results: Four themes emerged, including (1) the rural healthcare context for new NPs, (2) perceptions of new rural NPs, (3) early career phases in rural NP practice, and (4) adaptive and maladaptive factors experienced by new rural NPs.

Literature specific to early career experiences of rural NPs remains limited, with data focused on preparedness and transition to practice, particularly during the first postgraduate year. Motivators for rural recruitment included financial incentives and loan repayment opportunities, postgraduate residency experiences, personal and professional attachments to the rural setting, and a desire to improve healthcare access for rural populations. Perceptions of confidence and preparedness were noted in populations of new rural NPs who had prior rural experiences, dedicated mentors, professional networks, and access to supportive orientation opportunities.

Conclusions: Early career rural NPs, especially newcomers to rural life, are poorly represented in the literature; their experiences should be further explored. A qualitative, theoretical understanding of adaptive early career processes, representative of the perspectives of NPs themselves, would substantively contribute to workforce literature and could inform NP educational practices, clinical placements, organizational supports, and provide a framework for rural NP research. A cohesive theoretical framework representing early career rural NP experiences is needed to guide research, education, and practice toward decreasing turnover that affects patient outcomes.

Associations between Chemotherapy-Induced Nausea and Changes in Gut Microbiome

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Background and Significance: Despite evidence-based antiemetic treatments, 30% to 60% of oncology patients report chemotherapy-induced nausea (CIN). CIN is associated with nutritional deficits and poor quality of life in oncology patients. Using patient blood samples, our recent gene expression study identified two major biological mechanisms - 1) disruption of the gut microbiome and 2) mucosal inflammation as major mechanisms associated with CIN. No study has evaluated for associations between CIN and changes in the gut microbiome using patient stool samples- to provide direct evidence to support these associations. This SIGMA/WIN small grant supported pilot study addresses this knowledge gap.

Objectives: are to (1) identify demographic, clinical, symptom differences between patients who do and do not report CIN; (2) identify changes in gut microbiome alpha and beta diversity 3-5 days before (T1) and 5-7 days after (T2) chemotherapy in patients who do and do not report CIN; and (3) identify changes in levels of gut metabolites at T1 and T2 in patients who do and do not report CIN.

Methods: Newly diagnosed patients with breast cancer (n=12) who were to receive moderate to highly emetogenic chemotherapy provided data on demographic, clinical symptom characteristics including dietary intake and exercise. Ten patients mailed stool samples for timepoints T1 and T2. For aim 1, descriptive statistics was performed to determine phenotype differences between nausea groups. For aim 2, comparisons of alpha diversity changes between nausea groups were performed using two-sample t-test. For beta diversity, longitudinal UniFrac distances were calculated to compare the nausea groups, followed by PERMANOVA. For aim 3, box plot analyses identified levels of metabolites that were significantly different between the nausea groups.

Results: CIN was associated with - age <50 years, BMI >30 kg/m2, migraine history; difficulty concentrating, lack of energy, fatigue, feeling drowsy, dry mouth, diarrhea; change in abundance of Firmicutes and Bacteroidetes phyla and perturbations in levels of several gut synthesized metabolites (e.g., isobutyric acid ($p=0.02$)).

Conclusions: CIN co-occurs with several common gastrointestinal and neuropsychological symptoms associated with the changes in gut microbiome composition and function. Future personalized interventions may need to focus on maintaining baseline gut microbiome composition profiles to alleviate CIN and co-occurring debilitating symptoms. .

Implications to Nursing Practice: Clinicians need to assess patient risk factors that include younger age, migraine history, and comorbidities to monitor patients and provide appropriate pharmacological and non-pharmacological interventions for CIN and co-occurring symptoms to improve quality of life. This study will provide directions for future research for identifying gut microbiome related risk factors associated with patient symptoms and potential for prebiotic/probiotic interventions to alleviate CIN and co-occurring gastrointestinal and neuropsychological symptoms, for example, diarrhea, and fatigue.

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Intersection between Infant Gut Microbiome, Behavior, and Nursing Science

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Aims: To identify bacterial taxa in Very Low Birth Weight (VLBW) infant stool samples through a multivariate analysis using linear models and determine the association of microbiome with behavior at 4 years of age and how these findings are associated with nursing science and practice.
Background: Metabolites from gut bacteria can affect the blood brain barrier, alter microglia, and cause neurological injury, leading to behavioral and neurodevelopmental problems. The multidimensional training of nursing scientists makes them uniquely equipped to connect preclinical microbiome research with translational research and improve patient outcomes.
Methods: Eighty-three VLBW infants had stool samples collected for the first six weeks of life in the Neonatal Intensive Care Unit (NICU)(IRB#Pro00003468, R21 NR013094).Parents who consented were contacted for the follow-up study that explored relationships between the gut microbiome and later health, growth, and development(IRB#Pro00019955, NIH grant R01NR015446).Parents completed the Child Behavioral Checklist (CBCL) at home visits which includes six-DSM scales consistent with DSM diagnostic categories: affective, anxiety, pervasive developmental, attention deficit/hyperactivity, and oppositional defiant. We examined the associations between early-life microbiome and later behavior (at 4 years) by employing multivariate analysis by linear models (MaAsLin) implemented in the galaxy server. The abundant ASVs obtained previously were considered as predictors while the corrected CBCL scores were the outcomes. Associations were considered to be significant if $p < 0.05$.We explored the implications of the results in providing nursing care using precision health.
Assessment of Findings: In 19 cases, there were complete data from the 5 and 6 weeks of life for the microbiome analysis, cofounder adjustments, and behavioral follow-ups at 4 years of age. Adjusted CBCL scores were significantly associated with ASVs representing *Veillonella dispar*, *Enterococcus*, *Escherichia coli*, and *Rumincococcus*. *Veillonella* is an anaerobic Firmicutes that was present in our sample during the first few weeks. Most infants born via C-section, which was true for most of our sample, have higher pathogen abundances of *Klebsiella* and *Enterococcus*, which are associated with increased respiratory infections within the first year of life. Some microbiomes aare associated with mood and behavior. *Enterococcus faecalis* can convert levodopa to dopamine, reducing dopamine availability in the brain. Low levels of *Ruminococcus* are associated with higher depression scores, making it a potential biomarker for depressive disorder. This research reflects on nursing science using omics science to individualize and recognize the individual as a being with intrinsic factors of personal history and genomic permeating interactions with psychological, social and environmental factors.
Conclusions/Implications: There were significant relationships between gut microbiome ASVs and DSM-based behavioral scales from the CBCL. It appears that the gut microbiome dysbiosis of VLBWs may have relationships to later childhood behavior. Within the care model perspective, the nurse scientist considers the gut microbiome associations with long term health outcomes. This study contributes to the gut microbiome literature by adding analyses related to different behavioral domains using a standardized tool linked to the DSM. These results are preliminary due to the limited sample size. Other factors to include in future analysis are human milk, growth, parenting, and development characteristics after discharge.

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Relationships between Stress, HPA Axis Regulation, and Adolescent Mild Depression

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Aims: This study aimed to describe the relationships between perceived stress and four parameters of cortisol, identify the prevalence of mild depression, and examine the associations between perceived stress, cortisol levels, and mild depression.

Background: Adolescent depression is on the rise worldwide, with many teens having mild forms of depression that are undiagnosed. Dysregulation of the hypothalamus pituitary adrenal (HPA) axis has been implicated as one mechanism in explaining the association of stress and depression. While perceived stress and cortisol level, a measure of unstimulated or basal HPA axis function, have been studied among this population, results are inconsistent and different parameters of cortisol have been reported thus making comparisons difficult.

Methods: Adolescents 13 to 19 years of age from a community setting were recruited. Stress measures included the Perceived Stress Scale-10 (PSS-10) and salivary cortisol sample collection throughout the day (waking, 45 minutes post waking, 4pm, and bedtime) to calculate the diurnal cortisol slope, average cortisol levels, area-under-the-curve (AUC_G), and cortisol awakening response (CAR). The Patient Health Questionnaire-9 (PHQ-9) was used to measure depressive symptoms, where a cut-off score of 5 indicated mild depression. Spearman's rho was used to test the correlations between perceived stress and cortisol. Multiple logistic regression models were used to examine the associations between the stress variables and the probability of mild depression, adjusting for sex, age, ethnicity, income, and body mass index (BMI).

Outcomes: 73 participants were included in this study. The mean age of our sample was 15.82 years (standard deviation [SD]=1.78), consisting of 55.7% White and 31.9% Hispanic participants. 38% of the participants met criteria for PHQ-9 mild depression, and 29.2% for mild depression or greater. Higher perceived stress was associated with an increased odds of having mild depression or greater (odds ratio [OR]=1.11, p-value=0.022). Lower AUC_G was associated with mild depression or greater (OR=0.99, p-value=0.009). There were no correlations between perceived stress and cortisol and no associations among the other three cortisol parameters and mild depression or greater.

Conclusions: Our study showed that higher perceived stress was associated with a 11% increase in odds of mild depression or greater while lower concentration of cortisol throughout the day was associated with a 1% increase in odds of mild depression or greater. While our study is cross-sectional and combines mild depression and more severe forms of depression in the same group due to our small sample size, it is the first study to examine the relationships of stress, multiple parameters of cortisol, and mild depression in adolescents. Since mild depression is not consistently defined in the literature, clinician agreement with the definition as well future studies with a larger sample size and a more heterogenous sample are recommended. This study highlights the importance of early and ongoing screening of various types of stressors unique to the adolescent period (e.g., peer and family relationships, academic) and regular assessment of depression since mild depressive symptoms are risk factors for later depression.

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Association of Negative Work to Family Spillover with LDL: Evidence from Japan

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Aims: This study aimed to investigate impact of exposure to conflicting responsibilities between work and home, characterized by negative work to family spillover, on low-density lipoprotein (LDL) among workers.

Background: The dual roles many individuals play—as family members at home and as employees at work—intensify the sources of stress, creating a complex interplay of responsibilities. Unbalancing these roles can create stress when obligations from one role interfere with the other. The negative work to family spillover refers to stress experience resulting from these conflicting responsibilities. Psychosocial stress in the workplace is increasingly recognized as a significant determinant of workers' health, manifesting in adverse outcomes, such as cardiovascular and cerebrovascular diseases. Despite these negative clinical effects, the underlying physiological responses to such stressors remain insufficiently elucidated.

Methods: The analysis was conducted using data from Waves I and II of the Survey of Midlife in Japan (MIDJA) with 4-year follow-up period. This study included 155 participants actively employed at baseline and had complete data on the variables of interest. The negative work to family spillover was assessed by a validated 4-item scale at baseline, and LDL was repeatedly measured at both baseline and follow-up. Multiple linear regression was used to examine longitudinal associations between negative work to family spillover at baseline and LDL at follow-up, adjusting for covariates at baseline (including age, sex, marital status, education, management position, smoking, alcohol consumption, and physical exercise), as well as baseline LDL. The results were expressed as ß coefficients and 95% confidence intervals (CIs).

Assessment of Findings: After taking the baseline demographic information, socioeconomic status, and lifestyle factors into account, negative work to family spillover at baseline showed a significant association with LDL at follow-up (ß: 2.27, 95% CI: 0.68, 3.86). However, the effect was attenuated after adjusting for the baseline LDL (β: 0.82, 95% CI: -0.34, 1.99).

Conclusions: The findings of our longitudinal study suggested a potential long-term impact of negative work to family spillover on LDL, a well-established biomarker of cardiovascular and cerebrovascular diseases. Further investigations on physiological responses are warranted, such as using other cardiometabolic and immune biomarkers. The concept of work-life balance is a crucial social determinant of health among workers.

Funding: The Midlife in Japan (MIDJA) Study was supported by a grant from the U.S. National Institute on Aging (5R37AG027343). Ms. Saiki was partially supported by the Occupational and Environmental Health Nursing Program of the Southern California NIOSH Education and Research Center (SCERC), Grant Agreement Number T42 OH008412 from the Centers for Disease Control and Prevention (CDC).

Chaotic Patient Trajectory and Risk Framework: Development of a Foundational Approach

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Aims: Risk is a common focus of nursing research and practice. Nursing risk research includes physiologic (e.g., pressure injuries) and psychosocial (e.g., burnout) topics. However, there is no unifying framework for nursing and clinical risk research. This gap has led to fundamental issues such as risk misrepresentation and failure to generalize findings. Additionally, the patient's status and care are non-linear, making predicting and analyzing risk complex. This abstract covers key concepts in developing the Chaotic Patient Trajectory and Risk Framework (CPT-RF) and aims to provide a unifying foundation for risk research in complex clinical settings.

Description and Definition: Risk is a thick concept with a descriptive and evaluation load. Risk is traditionally considered a negative event and its likelihood of occurring. The CPT-RF consolidates Risk and Chaos theory, collectively addressing key concepts and their relationships. *Risk theory* considers competing events (Ei) and their resulting outcomes or yields (Yi). Risk theory and mitigation are common in economics and environmental science that reduce event's likelihood or impact. *Chaos theory* is established within physics and computer science, examining complex problems such as cancer genomics. Chaos theory refines risk research by considering uncertainty, time (t), non-linear trajectories, and the conditions in which the patient presents (Pic). Predicting an event based on initial conditions becomes increasingly difficult as time progresses. This transition from predictability to unpredictability is termed the predictability horizon (PH) and varies based on methods, context, and clinical problem. Clinicians cannot understand all factors leading to a negative event; thus, uncertainty (both measured and unmeasured) is necessary and central to the framework.

Logic Linking Theory to Research: The CPT-RF promotes clear delineation of the context, event, and outcomes, preventing ambiguity and promoting applicability. For example, a previous study has identified psychiatric illnesses and substance use as the "highest risk" features for patients experiencing non-invasive ventilation failure. This study defines endotracheal intubation as non-invasive ventilation failure. However, this population had a very low probability of death. In contrast, patients suffering a myocardial infarction in the same study were "low-risk" due to a lower probability of endotracheal intubation; however, they had the highest mortality rate when failure occurred. The CPT-RF considers the patient's unique initial condition and its influence on corresponding events and outcomes. Although patients may suffer the same events or outcomes, the timing and exact trajectory is not always the same. Failure to identify this nuance has led to overarching prevention strategies without effective change.

Conclusion: The CPT-RF offers a unifying foundation for future clinical risk research by addressing critical issues such as concept misrepresentation, unique presenting conditions, and non-linear trajectories. This new framework blends risk and chaos theory, synthesizing events, outcomes, time, and uncertainty. By focusing on individual initial conditions while recognizing distinct paths to similar outcomes, nurse researchers can begin to lay the groundwork for personalized healthcare interventions that will elevate patient care. This framework can contribute in novel and important ways to nursing research and practice.

Siblings As Caregivers for Children with Chronic Illness: A Qualitative Exploration

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Purposes/Aims: This study investigates and characterizes the caregiving roles assumed by siblings (7 to 17 years of age) of children with chronic illnesses or disabilities. We sought to gain deeper insights into the nature of care provided by these siblings, their preparedness, training, and available support, whether formal or informal, as they engage in caregiving for often medically complex children within the home setting. Additionally, we aimed to document and thematically analyze the relationship dynamics between these siblings and the child with special needs.

Rationale/Conceptual Basis/Background: Siblings to children with chronic illnesses often play a critical yet overlooked caring role within the home. Despite being a common practice in various cultures, the specific caregiving activities undertaken by these siblings is neither acknowledged nor described in the existing body of research. This study is prompted by the recognition of the need to delve deeper into the care that siblings provide and the challenges they encounter due to the unique demands imposed by their family's situation. Insufficient information exists regarding variations in the caregiving roles based on the type and complexity of the child's medical condition. While parents of medically complex children rely heavily on healthcare teams to impart essential caregiving skills for daily living, siblings are seldom integrated into this educational process.

Methods: We employed a qualitative descriptive design. A parent and sibling of a child with a chronic illness or disability participated in a semi-structured interview. Open-ended questions were utilized to extract responses, experiences, and opinions regarding the siblings' caregiving roles, their involvement in the child's care, the acquisition of caregiving skills, and the overall quality of their sibling relationships. Participants were purposively selected until data saturation was achieved. Data were collected and analyzed concurrently using an inductive approach to content and thematic analysis.

Assessment of Findings/Outcomes Achieved: Twenty siblings and 20 parents of children with chronic illnesses (n=40) participated in interviews. Siblings described their relationships in terms of companionship, friendship, and compassion. They also discussed the challenges associated with their siblings' diagnoses, behaviors, or needs that exceeded the demands of caring for typically-developing children. Siblings frequently undertook daily physical and emotional care, including the administration of complex medical management such as medication dispensing, tube feedings, and oxygen titration. Parents expressed their reliance on siblings, particularly when alternative childcare options were deemed inadequate to provide the same level of care as the sibling consistently delivered. Notably, siblings engaged in complex caregiving minimized the amount of their own participation and also reported a lack of support or training provided by healthcare teams.

Conclusions/Implications: This study underscores the vital and routine caregiving contributions of siblings to children with chronic illnesses and disabilities. The findings call for healthcare teams and child advocates to evaluate and extend support to these siblings who play an integral role in the care of children with chronic illnesses and disabilities. Such support should encompass acknowledgment, guidance, and formal training to ensure the well-being of both the caregiver and the recipient.

Child and Caregiver Risk Factors Associated with Child Neglect

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Background: Child neglect is an increasing, preventable, public health concern with negative consequences that impact children, families, and society. Given that children who are hospitalized with concern for neglect have heightened risk for poor outcomes, a clearer understanding of child and caregiver risk factors based on different types of neglect is needed to prompt early screening and facilitate access to resources that mitigate long-term effects.

Purpose: To describe child and caregiver characteristics associated with neglect types, social needs, and post-discharge care in children age 0-5 years hospitalized with concern for neglect in a large, tertiary pediatric medical center.

Methods: This is a retrospective study design with data extracted from Children's Hospital Los Angeles electronic medical record (EMR) in young children (0-5 years) hospitalized with concern for neglect during 2016-2020. A systematic process was used for neglect confirmation. Variable selection was informed by the Gelberg-Andersen Behavioral Model for Vulnerable Populations and categorized by neglect type, sociodemographics, social determinants of health (social needs), inpatient consultations, and post-discharge recommendations. Descriptive statistics and Chi Square using Fisher's Exact Tests were used to evaluate associations between neglect type and other variables.

Results: There were149 children hospitalized with confirmed neglect out of 2445 suspected cases. Neglect types were inadequate nutrition (40%), inability to provide basic care (37%), intrauterine substance exposure (25%), combined types (23%), and inadequate medical care (10%). Common characteristics or risk factors for neglect were age less than 1-year, male sex, Hispanic ethnicity, public insurance, past involvement with Child Protective Services, inpatient consultation services (social work, physical therapy, and occupational therapy), social needs (parent substance use/abuse, housing insecurity, homelessness) and post-discharge recommendations (primary care, physical therapy, and regional center). Neglect types varied by child medical history, social needs, and discharge recommendations, however inpatient consultation with psychology (3%) or psychiatry (3%) and post-discharge mental health referrals for children (3%) and family members (9%) were relatively absent across all groups. Statistically significant associations supported variation in social needs and post-discharge care per neglect type.

Conclusions: Five specific types of neglect were categorized in the Los Angeles area. Post-discharge care needs should focus on removing social barriers and optimizing resources, in particular mental health, to mitigate the risk of continued neglect and its long-term effects. Future research is needed to develop innovative prevention strategies and improve resource allocations per neglect type based on discharge location. Policy-level interventions should focus on sustaining programs that reduce poverty, promote positive parenting, and enhance access and use of mental health services for children and families.

Pain Is Reduced after Acupuncture in Children with Serious Illnesses

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Purpose: The purpose of this preliminary study was to explore whether acupuncture reduces pain in children with serious illness.

Background: Twenty to 40% of children suffer from chronic pain, and approximately 5% experience severe disability as a result of pain. They miss school days, struggle to participate in physical activities like sports, and spend substantially more time in the hospital compared to their peers. This is a distressing change in quality of life for both the children and their families/caregivers. Chronic pain and serious illness in children increases risk of dependence on medications. The opioid epidemic has increased attention towards integrative therapies for pain management, including acupuncture. Anecdotally, acupuncture is considered safe and helpful for children. However, prospective studies using standardized assessments and controlled interventions are lacking.

Methods: This study is a preliminary analysis of pain data collected in a larger prospective feasibility trial conducted at two major children's hospitals in the western United States. The parent study had an accrual goal of 100 participants ages 3 months to 30 years using convenience sampling to any of five integrative or complementary interventions. Care team members referred patients to the study. The informed consent/assent process with the parent/caregiver and child participant was conducted by the study team. Parents/caregivers were informed of the study goals and treatment methods, risks, and benefits. Once their informed consent was given, treatment was then offered to the patient. Acupuncture sessions were administered by a licensed, credentialed pediatric acupuncturist for 10-60 minutes in an outpatient clinic, inpatient setting, or infusion center. Participants completed a demographic form at enrollment. Pain was assessed by self-report (ages ≥7 years) immediately before and after each session using the Pediatric Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events (Ped-PRO-CTCAE) survey to evaluate pain frequency, severity, and interference. The Pediatric PRO-CTCAE items demonstrated strong convergent, discriminant, and known groups validity, as well as responsiveness over time. Parent-proxy completed the survey for children younger than 7 years. Changes in pain scores in response to acupuncture were analyzed using paired t-tests. Unless otherwise indicated, results are expressed as Mean (SD). A p-value < 0.05 was set as the threshold for significance.

Results: The study opened in June 2022 and closed to the acupuncture intervention in May 2023. Participants (n=79) aged 13.6 (5.7) years received 155 sessions of acupuncture in total, averaging 1.96 (1.29) sessions. Approximately one third of participants identified as non-white and about half were female. Diagnoses were evenly divided between cancer and other serious illnesses. The change in PRO-CTCAE pain frequency from pre- to post-acupuncture intervention was significantly reduced: -0.253(0.54), $p < 0.001$). There were no significant changes in pain severity or interference with daily activities ($p>0.5$).

Implications: These results suggest acupuncture may be effective for reducing frequency of pain in children with serious illness. As the parent study was an exploratory feasibility study and not designed for hypothesis testing, further research is necessary to validate and extend these results and define the role of acupuncture in treatment of pediatric pain.

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CHILD HEALTH/ILLNESS

Virtual Animal-Assisted Intervention for Youth with Life-Threatening Conditions

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Background: Children and adolescents undergoing treatment for life-threatening conditions (LTC) such as cancer are at high risk for suffering decreased physical and psychosocial quality of life (QOL). Animal-assisted intervention (AAI) involving live visits with canines shows strong promise to improve QOL outcomes in hospitalized children with cancer. The emerging field of *virtual* AAI allows access to AAI regardless of setting and extends to children at home. Youth and Pet Survivors (YAPS) is a novel form of AAI with dog and cat pen pals who share a LTC. Little is known about how exchanging letters with a dog or a cat influence perceived QOL in youth with a LTC.

Objective: To discern how writing with a canine or feline pen pal with a shared diagnosis influences experiences of living with a LTC, including perceived QOL, and how the human-animal bond (HAB) is expressed in letter narratives.

Method: A thematic narrative analysis approach was used to analyze 157 letter and 18 interview narratives from children in YAPS aged 6 to 19 years old. A conceptual framework was designed to guide the analysis, integrating the concepts of perceived QOL, the HAB, and emotional social support. Perceptions of QOL, the HAB, and social support were compared.

Results: Having an animal pen pal improved perceived QOL and was a potent source of emotional social support for children with a LTC. Collectively, the narratives illustrated co-created stories of the HAB. Themes included the virtual HAB as a mirror, constructing identity in the context of the HAB, expressions of the mutuality of the HAB, happiness with having a pen pal, illness story, and ways to connect to normalcy. Key components of how YAPS is best delivered were elucidated.

Strengths and Limitations: The rare set of children's epistolary narratives offered unique data. Limited ethnic diversity of the sample may limit transferability, calling for more research.

Significance: This is the first study of its kind and adds a conceptual framework and scientific evidence to the emerging field of virtual AAI and supports YAPS as an effective nurse-led palliative care intervention for this vulnerable population across the illness trajectory.

Effects of Weighted Blankets on Anxiety for Pediatric Oncology Patients

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The primary aim of the study was to determine if the utilization of a weighted blanket on outpatient pediatric oncology patients receiving chemotherapy reduces anxiety as measured by the Children's Anxiety Meter-State (CAM-S).

Every year, tens of thousands of children are diagnosed with cancer. As cure rates increase, it is critical to focus on psychosocial outcomes. Anxiety is well-documented in oncology patients and pediatric oncology patients have significantly higher levels of anxiety compared to their healthy counterparts. It was recognized that addressing anxiety in this population is essential in providing holistic care. Weighted blankets are a potential intervention to address pediatric anxiety. While weighted blankets have been studied in the adult population, very little has been done within the pediatric population.

A randomized 2x2 cross-over design was utilized for newly diagnosed pediatric oncology patients who met the following criteria: Age 4-17 receiving outpatient chemotherapy, who can complete seriation screening; English and/or Spanish speaking; new diagnosis of a liquid or solid tumor. Relapsed or bone marrow transplant patients, or those who have previously used a weighted blanket were excluded. Participants were randomized to one of two arms: weighted blanket first then usual care (WB:UC) or usual care first then weighted blanket (UC:WB).

Usual care visits included nursing assessment and existing support activities for anxiety such as art, movies, and/or a child life specialist. CAM-S scores were collected at the start and at the end of the infusion. During the weighted blanket visits, the blanket was placed on the patient at the start of infusion, and it was worn for at least 15 minutes. After that, patients could take the blanket on and off as they chose. CAM-S scores were collected prior to start of infusion and at the end. Standard care was also available during this visit. The CAM-S measures anxiety in the moment. This validated tool is from measured from 1-10, higher values indicate higher anxiety.
Power analysis revealed that 26 patients were required to obtain 80% power with a type 1 error of 5%. Descriptive statistics were conducted to describe the data. A linear mixed model with interaction effects was conducted to assess the treatment effect of the weighted blanket.

There were 26 patients who were enrolled into the study. Twenty-four with complete information were included in the analysis. Full regression models reveal that CAM-S decrease by 1.10 [CI: -1.93 to -0.27, p = 0.0065] between pre and post infusions. Further, first visit post measurement anxiety for WB group was higher by 0.479 as compared to post measurement of UC group; however, WB had decreased post anxiety by 0.689 compared to UC for the second visit. Those in the UC:WB group had higher baseline CAM-S during the first visit compared to the WB:UC group (4.8 vs. 4.0).

There was significant reduction in anxiety post infusion. WB added further reduction particularly in the second visit. While further research is needed, this study highlights not only the impact of weighted blankets, but of nursing care on anxiety for pediatric oncology patients.

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Social Determinants Impact on American Indian Survival with End-Stage Kidney Disease

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Purpose/Aims: The purpose of this presentation is to report the results of a nationwide survival analysis of American Indians/Alaska Native (AI/AI) and non-Hispanic Whites (NHW) persons diagnosed with end-stage kidney disease related to diabetes nationally and by Indian Health Service region. The results of the survival analysis were then correlated to the Area Deprivation Index® (ADI®), a social determinants of health (SDOH) metric.

Background: AI/ANs disproportionately suffer from diabetes compared to non-Hispanic whites (NHW). In 2013, 69% of end-stage kidney disease (ESKD) in AI/ANs was caused by diabetes (ESKD-D). However, updates on specific numbers of AI/ANs with ESKD-D from publicly available sources have not updated since 2013 as AI/ANs fall into "other" race categorization for data query tools.

AI/AN persons experience a cumulative buildup of health inequities that stem from SDOH. These disparities likely contribute to persistent diabetes-related disease that are a persistent concern for AI/ANs. One reason for the prevalence of diabetes within the AI/AN community is a result of poor access to nutritious food, especially in Tribal Nations. Government-provided food has been distributed to Tribal communities for decades and historically emphasized availability of low-cost, shelf-stable, and heavily processed foods which strongly contributed to obesity and diabetes rates in AI/AN communities. As a result of these policies, AI/AN mortality rates for kidney diseases and diabetes are higher than all other races in the US (1.5 and 3.2 times, respectively).

Methods: The survival analysis was driven by a secondary data analysis of 2021 United States Renal Data System (USRDS) data. Patient records eligible for inclusion were AI/AN and NHWs with diabetes (Type 1 or 2) as the cause of ESKD-D and a dialysis start dates of January 1, 2014, or later. Persons receiving a kidney transplant were excluded from this analysis. USRDS data was fused with ADI® to ensure geospatial congruence between 5-digit zip codes in USRDS data compared to 9-digit zip codes in ADI® data. The Kaplan-Meier estimator and Cox Proportional Hazards Model were used for the analysis.

Assessment of Findings: 81,862 patient records were included in this analysis, of which 1,798 (2.2%) were AI/AN. AI/ANs were found to survive longer, with an 18.4% decrease in risk compared to NHW. Additionally, AI/ANs were diagnosed with ESKD-D earlier and had less comorbid conditions than NHWs in this sample. Statistically significant variables in the nationwide survival analysis include AI/AN race, average ADI® ranking, age at diagnosis of ESKD-D, and number of comorbid conditions at dialysis initiation.

Conclusions: The findings of this survival analysis support the need for additional exploration of factors contributing to more rapid progression to ESKD-D, including a more specific analysis of the role of SDOH. It is likely that SDOH plays a role, but more extensive analyses with prospective cohorts may provide more context and meaning to SDOH measures. Based on these results, developing solutions to prevent rapid progression to ESKD-D in AI/AN populations and deliberate action to stem the negative impacts of SDOH is essential to improving long-term survival and quality of life.

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Two Distinct but Different Trajectories of Symptoms in End-Stage Liver Disease

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Background: Little has been reported about the clinical relevance and trajectories of symptoms in end-stage liver disease (ESLD). Being able to identify such trajectories may help to broaden our understanding of symptom experiences by patients with ESLD, and establish ways to target interventions and improve their outcomes.

Purposes/Aims: The purpose of this prospective longitudinal study was to identify trajectories of change in symptom burden over the course of 12 months in adult patients with ESLD.

Methods: The study was guided by the middle-range Theory of Unpleasant Symptoms because of its focus on the complexity and interactive nature of the symptom experience. Patients were recruited from hepatology clinics at two health care systems and were enrolled if they were 21 years or older and had a sodium-Model for End-Stage Liver Disease (MELD-Na) score of 15 or greater. Patients completed the Condensed Memorial Symptom Assessment Scale (CMSAS) physical symptom distress subscale (PHYS), modified Wisconsin Brief Pain Inventory (BPI) pain interference scale, Patient Health Questionnaire (PHQ-9), Uncertainty in Illness Scales for Adults (MUIS-A), and Short Form Health (SF-36) Survey at baseline and at 3, 6, 9, and 12 months. Clinical and sociodemographic data including social support and religiosity were collected as well. Descriptive statistics and latent growth mixture modeling were used to analyze the data.

Assessment of Findings: Data from a total of 192 patients were included in the analysis; 123 were male and 69 were female. Their mean age was 56.5 years (SD=11.1) and mean MELD-Na score was 18.8 (SD=4.9). Alcoholic liver disease was the primary etiology (n=65; 33.9%); ascites was experienced by 170 (88.5%) patients and encephalopathy by 136 (70.8%). There were 38 deaths and 39 liver transplantations over 12 months. Two symptom trajectories were identified: 62 patients (32.3%) had high and unmitigated symptoms, and 130 (67.7%) had lower and improving symptoms. Patients with high and unmitigated symptoms had twice the hazard of all-cause mortality (aHR 2.441, 95% CI: 1.220-4.765) and had worse physical ($p<0.001$) and mental quality of life ($p=0.012$) compared with patients with lower and improving symptoms. Symptom trajectories were not associated with MELD-Na scores ($p=0.867$). Female gender, social support, and religion were significant predictors of symptom trajectories ($p<0.05$ for all).

Conclusions/Implications: The results highlight that a comprehensive and multidimensional assessment of symptoms is essential to improve care and outcomes for patients with ESLD. Patients with ESLD who are at high risk for experiencing ongoing high symptom burden should receive early preventive and targeted health care services. To examine the effects of such services and pharmacological and non-pharmacological therapies on symptom burden, interventions should be developed and tested. Also, research is needed to further discover the role of gender and religion and potential associations between liver disease severity and symptoms.

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Sequencing of Symptom Management Interventions for Cancer Survivors and Caregivers

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Purpose/Aims: This research tested the relative effectiveness and optimal sequencing of two interventions for symptom management in cancer survivors during treatment and their informal caregivers. Cancer survivors were defined as individuals from diagnosis to the end of life, and their informal caregivers were defined as family members or friends who provide unpaid care to the cancer survivor.

Background: Despite strong evidence that symptom management interventions are efficacious, research testing the relative effectiveness and optimal sequencing of evidenced-based interventions for survivors and their caregivers is lacking. Previous research established the effectiveness of the two telephone-delivered interventions used in this study: 1) Symptom Management and Survivorship Handbook (SMSH) intervention where participants were called weekly to assess their symptoms, and then referred to self-management strategies, and 2) Telephone Interpersonal Counseling (TIPC) intervention where participants received 8 weekly 3- minute counselling calls to address psychological distress.

Methods: Survivors' and caregivers shared inclusion criteria were:) ≥18 years of age; 2) spoke English or Spanish; 3) telephone access; 4) not currently receiving regular psychological counseling. Survivors' additional inclusion criteria: 1) undergoing chemotherapy or targeted therapy for solid tumor cancers; 2) a baseline score of ≥2 on depression or ≥4 on anxiety from a 0-10 scale; and 3) a caregiver willing to participate in the study. Caregivers' additional inclusion criteria were not currently in treatment for cancer. Using a sequential multiple assignment randomized trial (SMART), survivor-caregiver dyads (N=374) were initially randomized to a 12-week SMSH (N=277) or SMSH combined with 8 weeks of TIPC (N=97). Cancer survivors, who experienced no improvement or a worsening of depression or anxiety after 4 weeks (defined as non-responders), and their caregivers, were re-randomized to continue with SMSH alone (N=44) or SMSH +TIPC (N=44). Mixed effects and generalized linear models were used to compare groups on PROMIS measures of depression and anxiety, and a summed index of 17 symptoms from the General Symptom Distress Scale over weeks 1-13 and at week 17 follow-up. Three dynamic treatment regimes (DTRs) were compared: 1) SMSH for 12 weeks (DTR1); 2) SMSH for 12 weeks with TIPC added from week 1 (DTR2); and 3) SMSH alone for 4 weeks followed by SMSH+TIPC for 8 weeks (DTR3).

Findings/Outcomes: Significantly lower anxiety was found for survivors randomized initially to SMSH alone (DTR1) compared to those in the combined SMSH+TIPC (DTR2,DTR3). At week 13, survivors' anxiety was significantly lower for DTR 1 compared to DTR 2. No other main effects for survivors or caregivers were found. Exploratory moderation analyses indicated benefit of adding TIPC for caregivers of non-responding survivors with high levels of baseline depression or anxiety.

Conclusion: Cancer survivor-caregiver dyads in all 3 DTRs demonstrated decreased depression, anxiety, and severity of symptoms by week 17. The combined intervention did not result in better symptom outcomes than the SMSH alone (DTR1). Practice implications are that the SMSH intervention would be beneficial as part of the standard of care, and future research should be conducted using the caregivers' scores on depression or anxiety as a basis for determining adding TIPC.

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Linguistic Markers of Stress and Coping in Cancer Dyads' Diaries during COVID-19

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Purpose: This study investigated linguistic markers of stress and relational orientation in prospective audio diaries recorded by cancer survivor and care partner dyads October 2020 through April 2021.

Rationale: Survivors and their care partners experience common stressors including uncertainty, social isolation, financial burden, and employment concerns, as well as unique role-related stressors. While survivors tend to focus on self-management, care partners tend to focus on others' needs while engaging in less self-care. The pandemic intensified routine and role-specific stressors while limiting social support access for many, potentially increasing dyads' reliance on communal coping. First-person singular ('I') and plural ('we') pronouns have previously been identified as lexical indicators of stress, relational focus, and communal coping style. We hypothesized that 1) care partners would use less "I" and more "we" language than survivors overall, and 2) care partner use of "we" would increase over time.

Methods: We recruited dyads from an NCI-designated cancer center and via social media for a longitudinal mixed methods study of social network interactions. Survivors were aged 18+, diagnosed within five years, and could identify a care partner aged 18+ who also consented. Study data were collected over 11 weeks; during weeks one, five, and nine, participants recorded a brief (one to five-minute) audio diary reflecting on current sources of stress and support. Audio diaries were transcribed, and analysis included dyads with at least two diaries per member. We used the Linguistic Inquiry and Word Count (LIWC-22) program to quantify first-person singular ("I") and plural ("we") pronouns. We calculated descriptive statistics for demographics and used longitudinal multilevel linear modeling, including fixed effects for role (survivor, care partner), timepoint (monthly intervals), and a random intercept for each dyad, to test hypotheses.

Assessment of Findings: Twenty-two dyads (n=44) recorded 131 diaries. Most participants were white (97.8%), not Hispanic (90.9%), women (56.8%); mean age was 46.6 (SD=18, range 19-76). Most dyads comprised spouses/partners (n=28, 63.6%) or parent-child relationships (n=12, 27.3%). Care partners used "I" ($\beta = -2.028$, $p<0.001$) significantly less frequently and "we" significantly more ($\beta = 0.573$, $p=0.003$) than their survivor study partners. There was no change over time in the use of either "I" ($\beta = -0.153$, $p = 0.551$) or "we" ($\beta = 0.016$, $p = 0.895$) for either care partners or survivors.

Implications: Dyad members exhibited divergent but stable linguistic markers of stress and relational orientation. Findings supported our hypothesis regarding care partners' us-focused orientation but not our hypothesis regarding increase over time. Whether this reflects lower levels of care partner self-focused stress, tendencies toward more communal coping, or role-bound cultural influences to focus on others, requires further examination of diary data in context. Future studies with more diverse participants are needed to 1) extend the timeframe to assess long-term linguistic changes mapped to role and survivorship trajectory and 2) test nurse-led communication interventions aimed at consciously shifting language use toward more communal coping for survivors, and more self-focus for care partners, and assess effects on stress and perceived support.

Funding: This study was funded by the University of Utah Immunology, Inflammation & Infections Disease-Vice President of Research Office COVID-19 Special Emphasis Seed Grant. Dr. Mansfield's effort was supported in part by the National Institute of Nursing Research T32NR013456.

Quality of Life Among Family Caregivers of Patients with Traumatic Brain Injury in Oman

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Background: Traumatic brain injury (TBI) is the leading cause of death and disability with a wide spectrum of symptoms that range from mild to severe. TBI is one of the major growing health problems in Oman. Among the Arab -Islamic countries Oman has 60% of the population below 20 years of age in whom traumatic brain injury occurs due to road traffic accidents, domestic fall injury and fall from the date palm tree. The severity of the symptoms and disabilities following the injury impose a huge burden on the Family caregivers (FCGs) of patients with traumatic brain injury (TBI).
Purpose: The study aimed to explore the predictors of quality of life among Omani family caregivers of traumatic brain injury patients.
Setting: This study was conducted at a major national trauma center in the country; it is the tertiary care national referral center for neurosurgery and reconstructive surgery in Oman that caters to patients with major trauma and TBI.
Methods: A cross-sectional design was used to collect data from 35 FCGs of patients with TBI and 36 patients post TBI. The data was collected at the time of discharge from hospital and 8 weeks post-discharge when the patient came for the first follow-up. The majority of the caregivers were female (52.8%), either a parent (41.7%) or child (27.8%) of the patient with TBI. The data collection questionnaire comprised of FCGs quality of life (SF-12 general health survey), preparedness for caregiving scale (PCS), the disability rating scale (DRS), and the TBI symptom severity scale.
Results: The majority of the TBI patients were male (52.8%) and had severe injury at the time of discharge (52.8%). The symptoms perceived as severe were inability to live independently (97.2%), loss of motor function (77.5%), psychological problems (66.7%) and loss of memory and concentration (63.9%). Most FCGs had a low caregiving preparedness (M= 19.74 ± 9.04) at the time of discharge. However, there was a significant improvement in the FCGs caregiving preparedness ($p < .01$), and significant depreciation in the caregivers' mental health ($p < .05$) at 8 weeks post-discharge. Caregiver age ($p = .000$), patient age ($p = .013$), caregiver employment status ($p = .001$), severity symptom related to mood ($p = .003$), and severity of insomnia ($p = .025$) were the significant predictors of FCGs quality of life (QoL) in terms of the physical component. The FCGs' mental health component was significantly associated with the caregiver age ($p = .003$), patient age ($p = .000$), caregiving preparedness ($p = .05$), severity of TBI patient symptoms of mood problems ($p = .001$), change in behaviors, aggression, anger, impulsivity ($p = .007$), and inability to live independently ($p = .034$).
Conclusion: The Omani FCGs of patients with TBI experience had a substantial negative impact on their QoL, which is positively correlated with severity of physical, emotional, and mental symptoms and the ability to live independently post TBI. The study recommends measures to enhance FCGs QoL by initiating adequate skill training programs and extending physical and mental support by the health care providers to the family members.

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The Association of Dysphagia with Heart Failure: A Scoping Review

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Purpose: This review aims to present a summary of the association of dysphagia with heart failure (HF). The results will add to the body of knowledge about the clinical significance of dysphagia in patients with HF and will map the approach for its management.

Background: Twenty percent of HF patients may experience dysphagia – the pain and difficulty in swallowing. Dysphagia may occur in HF patients due to the close proximity of the esophagus to the heart, however, it is not a recognized symptom of heart failure. Prior analysis using the All of Us study showed that HF patients with dysphagia reported poorer perception of their general, physical, and mental health, and had worse quality of life and fatigue than those without dysphagia. They also have lower body mass index (BMI), body weights, and serum albumin levels. Dysphagia could potentially provide valuable clinical insights into the overall HF trajectory and prognosis and potentially aid in the HF management.

Methods: The identification and selection of articles for this scoping review were carried out using Joanna Briggs' Scoping Review Methodology. The Preferred Reporting Items for Systematic Reviews and Metanalyses – Scoping Review guidelines (PRISMA-ScR) were used to report the findings. A qualified medical librarian assisted with the search strategy design and search using PubMed, CINAHL, Embase, and Scholar using the keywords *"dysphagia", "deglutition", "swallow", "heart failure", "cardiac failure", cardiac insufficiency", "heart insufficiency", "heart disease", "cardiac disease", "cardiovascular diseases"*, *"progress*", "exacerbat*", "advanc*", "worse*", "decompensat*".* The inclusion criteria were published articles on HF patients aged >18 years, full-text availability, and published in the English language or had an English translation. We did not set limitations for the recency of publication, duration of the study, or geographical location.

Results: Twelve articles were included in this review: case reports (n=10), literature reviews (n=2), longitudinal studies (n=2), prospective cohort studies (n=4), retrospective cohort studies (n=2), and a cross-sectional study (n=1). Findings suggest that dysphagia in HF patients may be linked to acute decompensation resulting from the compression of the esophagus by an enlarged heart, primarily by the left atrium. Dysphagia may even precede dyspnea in impending decompensation. While its association with readmission rates remains inconclusive, dysphagia appears as a significant predictor and risk factor for unfavorable short-term outcomes, including aspiration, suffocation, prolonged hospitalization, compromised functional recovery, malnutrition, and dehydration.

Conclusion: This review underscores the intricate relationship between dysphagia and HF, emphasizing its reciprocal impact. There appears to be an association between dysphagia and mortality. Proactive surveillance and management of dysphagia as well as a multidisciplinary approach tailored to the severity of dysphagia is crucial in providing comprehensive support to HF patients.

Implications: The limitation of available literature about dysphagia in HF suggests that dysphagia may be an atypical, under-recognized, and under-researched symptom of HF. This gap represents an in-depth need to understand the mechanisms connecting dysphagia and HF and its impact on HF outcomes. Furthermore, a systematic review is warranted to establish evidence and clinical guidelines to improve the care of HF patients who are experiencing dysphagia.

Academic Nurse Educator Shortage: Policy Implications on Health and Equity

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Purpose: The purpose of this study is to gain an understanding of the current Academic Nurse Educator (ANE) status in Institutes of Higher Education (IHE) in the United States (US), identify barriers to improving the ANE shortage, and provide recommendations for initiatives US policymakers can employ to address the ANE shortage.

Background: The healthcare crisis in the US is multifaceted. Nurses are the largest group of healthcare personnel serving in multiple care settings. US nursing schools reported turning away nearly 91,938 qualified applications from baccalaureate and graduate nursing programs in 2021 due to insufficient faculty, clinical sites, classroom space, clinical preceptors, and budget constraints. The nursing profession is experiencing shortages due to a lack of potential ANEs, inequitable ANE workforce distribution, and high turnover for ANEs. A total of 2,166 full-time faculty vacancies were identified in a nationwide survey of 909 nursing schools with baccalaureate and graduate programs. In a special survey on vacant faculty positions for the academic year 2022-2023, the AACN cited the need to create an additional 128 faculty positions to accommodate student demand.

Method: The nominal group technique qualitative method was used to gain a consensus from the focus group on the barriers IHE administrators encounter when implementing initiatives to meet the needs of ANEs. The initial sample consisted of 45 ANEs from various private, public, for-profit, and not-for-profit IHEs in the US. The ANEs represented full-time, part-time, and tenured faculty in graduate and undergraduate nursing programs and administrative personnel. After several meetings, 25 participants remained, with experience ranging from 5 to 45 years.

Findings: Five policy themes were identified to address the ANE shortage: 1) enhanced and sustained funding for recruitment and retention of ANEs; 2) targeted preparation of ANEs to reduce attrition; 3) sustained and formalized academic-practice partnerships; 4) the creation of a national center for nursing education; and 5) upgrading the role of the ANE proportional to education, knowledge and skill requirements and scope of responsibilities.

Recommendations: ANEs must advocate for the profession by engaging education policymakers to address the ANE shortage and prevent the looming health crisis resulting from a lack of trained nurses to care for an aging population with multiple complicated health issues. Policymakers must respond by providing funding, updating current policies, and creating new approaches to address the retention and recruitment of ANEs.

Preparing Preceptors and Clinical Nurse Educators to Address Health Equity

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Purpose: The purpose of *Oregon Nursing Education Academy* (ONEA) is to recruit, retain, and educate nurses in Health and Human Services Region 10 (Oregon, Idaho, Washington and Alaska) to serve as clinical nurse faculty and preceptors to increase the nursing workforce and improve health equity.

Background: The West is experiencing a nursing shortage unlike others in the past due to a number of complex reasons, including the extraordinary demands of the Covid-19 pandemic and its continued impact on nurses. Effective training and support are needed to effectively support new nurses. Additionally, nurse educators must have a foundational understanding of health equity and social determinants of health (SDOH) and how to teach these and related concepts of health disparities, racism, and implicit bias to achieve the recommendations of the 2020-2030 Future of Nursing report that nurses are prepared to address health equity and SDOH. Nurse educators and preceptors may not have had formal or professional development in addressing or teaching these concepts, which may pose a barrier to implementing these recommendations.

Methods: There are two pathways in ONEA: the clinical nurse faculty and preceptors scholars programs. Participants selected as clinical nurse faculty scholars enter the Master's in Nursing Education to receive training and curriculum development that integrates concepts of social determinants of health and health equity into educational design to improve health outcomes through nursing education. Participants selected as preceptor scholars receive a combination of training and curriculum development that includes continuing education and two graduate courses to facilitate education on clinical teaching and SDOH. Participants received academic support and career guidance as well as socialization to the educational role through monthly meet-ups with nurse educators and financial support to attend a nursing education conference.

Findings: In year one of the academy, ONEA has supported 25 clinical faculty scholars and 16 preceptor scholars from all four states. In a recent evaluation of the program, on a scale of 1-10 with 10 being maximal support, participants rated the following support highly as: academic (8.78), financial (9.78), and career guidance and social support (8.22 each). Twenty-two scholars recently attended a nursing education conference and networked with nurse educators. Qualitative feedback from participants indicates the program is reinvigorating enthusiasm for their career in nursing and substantiates their learning of health equity concepts. Those who enter the preceptor scholars program reported that this experience was a good opportunity to assess their readiness for graduate school.

Conclusions: ONEA supports the development of nurse educators and preceptors to progress in their skill in educational principles, as well as teaching health equity and SDOH, to improve and transform healthcare.

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Building Nursing Leadership Capacity for Healthy Aging in Diverse Populations

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Background/ Rationale: Individuals aged 65 years and older comprise 16% of the US population and 24% are members of racial or ethnic minorities. Nurses are expected to demonstrate competency in supporting diverse populations of older adults (OAs) across the health care continuum. Nursing education content and clinical experiences focused on supporting healthy aging through advocacy and team leadership is essential for achieving competencies in older adult care.

Purpose: To describe a specialty immersion pilot course series that engaged entry-level nursing students from diverse backgrounds in developing specialty knowledge and leadership skills for supporting healthy aging.

Description of Project: Eight BSN students completed two summer intensives that blended interactive classroom and clinical experiences. The framework for the curriculum was the *4Ms of Age-Friendly Health Systems* (What matters most, Mobility, Medications, and Mentation). The first course included critical topics in healthy aging (ageism, advanced care planning, caregiving, frailty, multi-morbidities, and advocacy) and the lived experience of diverse OAs. Clinical experiences included simulation-based learning activities and working with older adults in diverse care settings. The second course included advanced care concepts for supporting healthy aging (health restoration and rehabilitation), aging in underserved communities, clinical leadership skills, and clinical experiences focused on supporting community-dwelling older adults in rural and underserved settings. A mixed methods approach was used to evaluate educational outcomes including measures of attitudes toward aging and ageism, weekly reflections on clinical experiences, and overall program evaluation.

Assessment of Outcomes: A general measure of attitudes on aging revealed an improvement on attitudes about caring for older adults across the two courses. Ageism was measured using the Fraboni Scale of Ageism at three times (during course one on the first and last day and during course 2). Results include the following: Time 1 (M=47.43, range 38-59), Time 2 (M=40.13, range 33-58) and Time 3 (M=47.86, range 38-60). Changes in scores were not statistically significant over time (Time 1 – Time 2: Mann-Whitney U z-score = -1.74, p>.05) and (Time 2 – Time 3: Mann-Whitney U z-score = -1.79, p>.05). Structured weekly journal reflections revealed intentional application of the 4Ms across care settings and critical insights into caring for OAs in diverse settings by 100% of the students. Students demonstrated sequential competencies in comprehensive geriatric assessment, incorporating the 4Ms and advanced nursing care of OAs through objective structured clinical exams (score $\geq$ 80%, range 80 – 100%) at the end of each course. Students rated interactive leadership discussions, clinical simulation, and clinical immersion as the most meaningful learning activities.

Conclusions: This course series builds on foundational geriatric nursing curriculum and can be used as a model for integrating in-depth experiences with diverse older adult populations into entry level nursing and interprofessional curriculum. The educational strategies presented may be used as a basis for building nursing leadership capacity to support OA populations across care settings. Further exploration is needed to determine the impact of this two-part educational intervention on the application of specialized knowledge, skills, and attitudes by new graduate nurses working with older adults.

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Rural Health Disparities and Nursing Education: Using Simulation to Help Bridge the Gap

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Purpose: Utilize simulation in a prelicensure nursing program to help learners identify healthcare disparities, potential barriers and solutions when providing comprehensive care to rural communities.

Background: When compared to urban areas, individuals that live in rural communities are more likely to suffer from chronic healthcare issues due to lack of health insurance, transportation barriers, and proximity to care, among other factors. The ability to provide clinical experiences that give prelicensure nursing students a chance to plan and provide nursing care in rural settings remains challenging and therefore, limited. Simulation-based education provides a safe and consistent learning experience, giving future healthcare providers the opportunity to interact with a patient in multiple rural settings.

Brief Description: Using the NLN Jeffries framework along with the Healthcare Simulation Standards of Best Practice, we developed a simulation that follows a patient and his wife through several scenarios highlighting rural challenges. After a pre-briefing that includes reviewing pre-work aimed at helping students consider potential healthcare disparities, learners proceed to provide an IDEAL (Include, Discuss, Educate, Assess, Listen) discharge from an urban acute care facility, follow-up with a telehealth visit two days post-discharge, assess, educate, and provide resources to the patient during a nurse-led clinic visit and finally, visit the patient at home to assess progress and continue patient-centered care.

After each scenario, an experienced facilitator helps learners debrief the situation, focusing on communication, education, and resources available to patients and caregivers living in rural settings. Learners take turns interacting with the patient and his wife while the rest of the team observes; each scenario runs 15-20 minutes with a debriefing lasting 30-40 minutes. The entire learning experience, planned for a group of eight learners, runs approximately four hours and occurs within a Community and Global Health course in the final year of the prelicensure nursing program.

All students in this prelicensure nursing program complete a Simulation Effectiveness Tool-Modified (SET-M) to evaluate each simulation experience. The SET-M includes statements about the simulation pre-briefing, learning, and debriefing. After completing debriefing and reviewing together whether or not scenario objectives were met, students use a QR code to complete the SET-M prior to completing the learning experience.

Assessment of Outcomes: Over a three-semester period (one calendar year), 118 students completed the SET-M following this scenario. 94% of students scored the simulation experience in the ‘strongly agree’ category (highest rank for the SET-M) while 6% answered ‘somewhat agree’. Anecdotally, learners frequently comment on their change in perspective after reviewing the resources/pre-work provided and visiting with this patient and his wife. These results demonstrate the simulation is an effective educational tool to help learners address health disparities in rural communities.

Conclusion: Simulation provides students an opportunity to interact with patients who face barriers in accessing healthcare, giving them a chance to practice patient-centered care while encountering multiple rural health challenges. Evaluation of knowledge (pre- and post-experience) and longitudinal evaluation of learners’ ability to assist with resources are needed to further determine the effectiveness of this simulation.

Evaluating DNP Student Responses to Trauma Informed Education Practices

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Aims: To analyze student experiences of specific Trauma Informed Education Practices (TIEP) in a Doctor of Nursing Practice course.

Background: Schools of nursing seek methods for supporting the success of historically excluded or minoritized students. Increasing diversity in nursing programs will increase diversity within the nursing workforce, which will in turn improve health equity for patients. TIEP is rooted in the six key principles developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) *Trauma-Informed Approach* – 1) Safety, 2) Trustworthiness and Transparency, 3) Peer Support, 4) Collaboration and Mutuality, 5) Empowerment, Voice and Choice, and 6) Cultural, Historical, and Gender Issues. These principles are being used in this study as a framework for pedagogical modification. It is unknown how nursing students experience and evaluate the importance of specific TIEP approaches.

Methods: Key stakeholders at the subject school identified TIEP they have implemented. A list of 47 items comprised the subsequent survey, subcategorized by the SAMHSA principle they seek to uphold. Participants selected “Not important or helpful”, “Somewhat important or helpful”, or “Very important or helpful”, for each of the 47 items. The survey also included demographics, and questions regarding Belonging, Resilience, Discrimination, and Thriving. Students in their second year of DNP education (n = 71) were invited to complete the survey during summer term, 2023. Descriptive statistics were used to describe participant demographics, means on individual tools, and regression analysis was used to identify relationships between TIEP assessment and other survey responses.

Assessment of Findings: Participants (N= 35) were predominantly female (83%), white (74%), and between the ages of 26 and 35 (77%). Scores reveal statistically significant, high level of Belonging (p=<0.01) and Resilience (p=<0.01). Seventeen (49%) participants report experiencing one or more forms of discrimination at least a couple times a month. Mean score for the 47 TIEP was 2.51 on a 3 point scale (p=<0.01, Cronbach’s alpha 0.8). The Peer Support subcategory scored the lowest at 1.98, and Cultural, Historic, and Gender subcategory scored the highest at 2.71. The highest scoring items included *Course design that includes clear expectations for assignments; and Students of all identities, backgrounds, and experiences are welcomed to the program.* The lowest scoring items included *Faculty knowing about what is happening in my personal life; and Forums for peer discussion and collaboration (not graded)*. Both overall TIEP score and the Peer Support subcategory score increased with increasing Discrimination score.

Conclusions/Implications: TIEP is an emerging and innovative approach that encompasses pedagogy, practice, and policy. This study demonstrates that students value practices that increase transparency and celebrate cultural diversity. Findings indicate that overall TIEP and Peer Support items may increase in importance to those experiencing discrimination, and are therefore critical to supporting minoritized students. Further research is needed among a more diverse student group to better understand how students evaluate TIEP so that faculty can tailor and develop courses more effectively to welcome and retain minoritized students.

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Interdisciplinary Bias Among Healthcare Professions Students

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Purpose/Aim: The purpose of the study was to examine the possible presence of interdisciplinary bias among healthcare professions students in the context of an interprofessional education (IPE) learning experience. The study's research question was: what is the impact of an IPE learning experience on the self-reported interdisciplinary biases of nursing and speech-language pathology students?

Background: The historical yet persistent presence of territorial conflict, "turf" battles, and prejudice between healthcare professions continues and is well-documented in the literature. Dr. George Szasz identified territorial conflict as a significant barrier to successful implementation of IPE and interprofessional collaborative practice. Today, the issue of interdisciplinary attitudes, stereotypes, and bias remains as relevant as it was more than 50 years ago.

Methods: This IRB approved study used a mixed-methods, pre- and post-test design with a convenience sample of 60 nursing and speech-language pathology students. The interprofessional students participated in a sequenced IPE learning experience including an ice-breaker for students to compare and contrast the different roles and responsibilities of their professions, participated in an interactive lecture burst regarding palliative care (PC), and followed by participation in an unfolding PC case study using team-based learning andragogy. The students completed the informed consent process, a demographic survey, a pre- and post-survey entitled the Interprofessional Attitudes Scale (IPAS), and provided responses to reflective questions. Descriptive analysis was used to analyze the quantitative data and the qualitative data were analyzed for emerging themes.

Results: This presentation will provide the demographic data, pre- and post- data results, and the qualitative emerging themes from the study. The data regarding interdisciplinary bias will be highlighted. For example, when students were asked if other disciplines have prejudices towards their discipline, the pre- versus post- learning event data revealed the following responses: (a) pre-36.6% and post-37.1% indicated strongly agree or agree, (b) pre-41.67% and post-38.7% responded undecided, and (c) pre-21.67% and post-24.2% reported disagree or strongly disagreed. When students were asked if they have prejudices about professionals or students from other healthcare disciplines, the data revealed: (a) pre-28.33% and post - 32.25% reported strongly agree or agreed, (b) pre-24.0% and post-17.74% indicated undecided, and (c) pre-48.33% and post-50% responded disagree or strongly disagreed.

Conclusion: The results of the study revealed a high level of interdisciplinary bias among health professions students. Faculty and clinical educators need to integrate direct instruction in the form of class activities and discussions to bring an awareness to students of preexisting, hidden, interdisciplinary biases. These planned activities and discussions help to move these hidden biases from the unconscious level to the conscious level. Once awareness is raised, the students can begin to recognize and correct their own misconceptions. Therefore, educators should choose interprofessional activities that will provide students with additional opportunities to interact, discuss, and reflect with students from other disciplines, which will help them dismantle preconceived biases and establish their dual professional identity.

Painting a Landscape of Acute Care Nurse Scientist Work

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Background: Hospitals are increasingly hiring nurse scientists, motivated in part by nursing excellence designations such as Magnet. Magnet designation requires at least three, nurse-led, Institutional Review Board-approved research studies to be conducted in the hospital every four years and for nurses to be actively implementing evidence-based practice (EBP) projects using research evidence. However, clinical nurses often lack the specialized knowledge and training necessary to engage in well-designed research or EBP. Nurse scientists are PhD-prepared individuals with expertise to mentor clinical nurses to navigate the rigor and complexity of creating, implementing, analyzing, and disseminating research and EBP projects. Yet, due to the niche nature of the role, it is unclear how to best quantify nurse scientists' consultations supporting nurses to conduct research and EBP. An innovative approach to quantify the day-to-day operations of one nurse scientist responsible for 24 hospitals within a 52-hospital health system was created and tested.

Purpose: To describe an innovative strategy to quantify acute care nurse scientist research and EBP consultations.

Methods: An electronic "Research and EBP Consultation Tracking Form" was created using Research and Data Capture (REDCAP). Each day, the nurse scientist would enter unique consultations characterizing consultation date, project type (EBP versus research), project title, project lead contact, and time spent on the consult (in minutes). One nurse scientist with four years of experience in the role piloted use of the tracking form from April 10, 2023, to September 29, 2023. Data entries were reviewed descriptively.

Results: During the pilot period, the nurse scientist reported 856 hours worked and 361 hours providing consultations (42% of time). A total of 332 consultations were entered (n=177 research and n=155 EBP). In all, 72 unique projects were described including 65 unique project leads. Per consultation, the nurse reported spending more time supporting research versus EBP (m=76.2 minutes versus m=52.2 minutes). During the 5-month pilot, project consultation was documented during all phases of clinical inquiry, from protocol development and receiving IRB approval, to analysis, interpretation, and dissemination of findings through presentations at peer-reviewed conferences and healthcare journal publications. The nurse scientist reported ease of using the tracking form, although issues were identified such as: time-intensive process documenting all consultations each day, inconsistency with reporting consultations, frequent "back-charting", and potential for under-reporting.

Conclusion: Having a structured system in place to document the landscape of nurse scientist work can help better articulate the impact and functions of this unique nursing position. Further work is needed to test the sustainability and utility of data generated using a "Research and EBP Consultation Tracking Form".

Implications for Practice: Describing the scope of work of a nurse scientist in the hospital setting is a first step to highlighting the need and demand for the specialized research and EBP knowledge and mentorship the nurse scientist can offer, particularly in hospitals aspiring to receive or maintain Magnet designation. Health systems interested in engaging nurses in research and EBP should invest in a nurse scientist position to facilitate clinical nurse-led, high-impact, healthcare-focused research and EBP.

Vertical Care: Addressing ED Overcrowding & Improving Throughput

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Background: Overutilization of Emergency Departments (ED) is a widespread problem in the United States, resulting in increased waiting times, causing more patients to leave without being seen (LWBS) and reducing patient satisfaction. During the triage process of assessing a patient, an Emergency Severity Index (ESI) score is assigned, ranging from 1-5 is assigned with higher scores indicating less acuity. Evidence supports that implementation of a dedicated space to quickly assesses and treat patients with higher ESI scores reduces wait times, increases patient satisfaction, and improves LWBS.

Purpose: To compare differences in patient waiting times, left without being seen rates, and satisfaction scores before, and after implementing a “Vertical Care” (VC) area to treat patients with higher ESI scores.

Methods: In this evidenced based practice project, the ED Patient Through Put Committee collaborated to create a VC area mid-2022. The VC area included a treatment space with private exam rooms where patients would be assessed, and pertinent diagnostics completed. Patients would then be placed in a semi-private area with recliners while awaiting diagnostic results and a discharge disposition. The committee developed inclusion and exclusion criteria to determine appropriate patient placement in VC as follows; ESI between 3-5, ability to tolerate sitting up, and the absence of infection or behavioral health diagnosis. At triage the Lead ED RN determines which patients go to VC verses the main ED. Twelve registered nurses and ED technicians trained as super-users and preceptors for the VC area October through December 2022. The committee identified several quality outcomes to measure improvement before and after VC implementation including time to disposition, average length of stay (ALOS) for non-admitted patients, LWBS rate, and patient satisfaction.

Results: From January to August 2023, the ED treated a total of 56,235 patients of which 10,019 patients were treated in VC (18%). Results showed a statistically significant reduction in the LWBS rate with the results being 5.8% pre and 3.2% post VC implementation ($m=5.8\%$ versus $m=3.2\%$, $p=0.03$). Results showed a statistically significant reduction in Time to Disposition which was 209 minutes for all discharged patients and 162 minutes for VC patients, post implementation ($m=209$, $m=162$, $p=0.00014$). Outcomes showed discharged ALOS had significantly improved post VC implements by decreasing from 254 minutes pre to 229 minutes post implementation ($m=254$, $m=229$, $p=0.002$). Overall patient satisfaction showed a statistically significant improvement by increasing from 59.9% to 70.2% ($m=59.9$, 70.2, p value < 0.01).

Conclusion: After implementation of VC, patients in the ED received a disposition more quickly, were less likely to leave without being seen and reported higher satisfaction.

Implications for Practice: Implementing a dedicated space to see patients with a higher ESI can contributed to better patient outcomes. This model could be considered for adoption in EDs nationwide to ease capacity issues related to overutilization.

Where Are the EBP Competencies in the AACN Essentials? a Modified Delphi Study

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Purpose/Aims: The purpose of this study was to determine the presence of the EBP competencies in the AACN essentials by domain, and level and to identify gaps in the presence of the EBP competencies.

Rationale/Conceptual Basis/Background: The passage of the 2021 AACN Essentials marked a shift from content- to competency-based education. As AACN re-imagined the Essentials, they also shifted from essentials to 10 domains (each with competencies and sub competencies) plus eight "featured concepts" intended to be integrated across the domains; one of which is evidence-based practice (EBP). In 2014, Melnyk et al. created EBP competencies that allow measurement of competence to determine whether we're hitting the intended mark of developing clinicians who are competent in EBP at both an entry- and advanced-level. A diverse team of EBP experts from across the U.S. wondered how the Melnyk et al. (2014) EBP Competencies are represented in the 2021 AACN Essentials competencies and sub-competencies for entry- and advanced-level professional nursing education.

Methods: A four-round modified Delphi approach was used by a diverse team of DNP- and PhD-prepared EBP experts from across the U.S. to crosswalk the AACN essentials domains, competencies, and sub-competencies with the EBP competencies.

Assessment of Findings/Results: Although each of the 24 EBP competencies (13 entry-level and an additional 11 for advanced-level clinicians) cross-walked with at least 1 AACN sub-competency for entry- or advanced-level professional nursing, they were sparsely represented. Three entry level domains had no mappings between its sub-competencies and EBP competencies; these were Interprofessional Partnerships, Professionalism and Development. For the entry level, the domain that mapped the highest was scholarship with 9 out of 13 competencies. In the graduate all domains had at least one competency addressed, however three domains had less than 3 competencies; these included Development (1 competency), Population based care (2 competencies), and Patient centered care (3 competencies). For the graduate, the most that mapped was professionalism.

Conclusions/Implications/Recommendations: All the EBP competencies map to at least one AACN sub-competency, although the EBP competencies are sparsely represented. Practice partners are counting on academicians to adequately prepare the next generation of clinicians/providers to be steeped in EBP. All steps/skills of EBP must be integrated in order to prepare future clinicians/providers to be evidence-based practitioners. It is important for academicians to integrate and map EBP competencies to curricula in a thoughtful and intentional manner in order to incorporate all steps of the EBP process, meet corresponding AACN essentials and needs of practice partners.

Accuracy of Nursing Intake Assessment in an OB Triage Unit

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Problem and Purpose Statements: While great effort has been placed into implementing a standardized intake process in the obstetric triage unit, limited studies were available that addressed the accuracy of nursing intake assessment adhering to the standardized acuity-based intake algorithm. The purpose of this project was to optimize patient safety and workflow efficiency by implementing a standardized triage intake process and assessing the accuracy of nurses' intake assessments.

Methods: The project was conducted at a non-profit, 353-bed acute care hospital located in the greater Los Angeles metropolitan area. Approximately 3,600 newborns are delivered annually, and the OB triage has approximately 7,500 visits a year. The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) Maternal Fetal Triage Index (MFTI) was selected as a tool to implement. After a month post-completing implementation, 150 available medical records of pregnant women who visited the OB triage were reviewed. Descriptive statistics were used to describe and analyze the data.

Results: Of the 150 records reviewed, 128 patients (85.3 %) were triaged accurately following the MFTI algorithm, and 22 patients (14.7%) were triaged inaccurately. Among 22 patients who were inaccurately triaged, more than half of the patients (*n* = 13, 59.1%) were underestimated or under-triaged, i.e., they were triaged less urgently than their actual acuity of the needs. The 13 under-triaged patients presented one of the three commonly seen healthcare concerns in an OB triage unit. Those independent predictors of under-triage included recent trauma, a complaint of decreased fetal movement, and less than 34 weeks of gestation with complaints of, or detectable, uterine contractions.

Discussions: Limited studies were available to analyze the 85.3 % (*n* = 128) accuracy rate. Two studies measured the accuracy rates in ED which were 72.9%, and near 90% respectively. Although these limited studies reported their ranges as acceptable, a continuous effort to achieve 100% accuracy should continue.

The project findings reported that no unnecessary emergency cesarean delivery or an uncontrolled delivery out of asepsis occurred during the data collection period related to inaccurate intake assessment. There were also no adverse patient outcomes nor improper patient discharges due to inaccurate nursing assessment. However, closer attention must be given to under-triaged patients as it can cause delayed treatment or inaccurately influence the disposition of the patient.

Limitations: Generalizability is limited because the project was conducted in a single OB triage unit. Sampling and membership biases were at risk which also limits the generalizability.

Conclusion Statement: Implementing a standardized intake process is a great win for patient safety and efficient workflow. However, such safety and efficiency will be further enhanced when nursing intake assessments are accurately performed. The unit leaders should consider ongoing education on the principles and care benefits of standardized triaging, auditing of compliance, and setting targets for the successful implementation of a standardized intake process in OB triage.

Measurement Matters: Defining Rates of Postoperative Pulmonary Complications

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Background: Post-operative pulmonary complications (PPCs) increase morbidity and mortality following surgery with general endotracheal tube anesthesia (GETA) and paralysis. Anesthesia providers work to optimize antagonism of pharmacologic muscle relaxation, which is critical to avoiding residual weakness and subsequent PPCs. Additional risk factors for PPCs include greater age and BMI, longer case duration, pre-existing respiratory disease, and American Society of Anesthesiology physical classification (ASA) scores of three or higher. Carefully defining and measuring PPCs is essential to tracking incidence rates.

Purpose/Aims: To describe the rate of PPCs, defined in a variety of ways (diagnosis of postoperative pneumonia, acute lung injury, acute respiratory distress syndrome, desaturation rates, or the use of high flow oxygen or oxygen device such as CiPAP or BiPAP), among adults undergoing GETA at Providence Sacred Heart Medical Center (SHMC) and Providence Holy Family Hospital (HFH) from 2017 to 2020.

Methods/Approach: Three separate inquiries addressed this purpose among different populations. Sample 1 was comprised of all adults (n=90,724); sample 2 healthy adults (n=10,395); sample 3 high-risk adults (n=22,290). The datasets were retrieved from the hospital EHR and de-identified data were provisioned through REDCap after ethics review. Descriptive and bivariate statistical statistics characterized the project sample and evaluated rates by time. Multivariable analyses examined patient and case characteristics more likely to be associated with PPCs.

Results: Overall and in keeping with the literature, a low prevalence of pneumonia was detected, but incidence rates increased over time for all adults but not for sub-groups, depending on analysis technique. Depending on definition, the rate of pneumonia varied between 0.12% (healthy) to 1.85% (high-risk). Results revealed a 9% increase in the odds of hospitalization for a post-operative diagnosis of pneumonia, acute lung injury (ALI), and adult respiratory distress syndrome (ARDS) after adjusting for literature identified co-variates (OR 1.09, $P<0.0001$, 95% CI 1.05-1.13).).

Conclusion: To the authors' knowledge, this is the first project of this size to examine rates of PPCs following anesthesia (2017-2020). The low prevalence of PPCs is not unforeseen as postoperative pneumonia, ARDS, or acute lung injury are uncommon diagnoses, yet when expanding PPCs to desaturation events and the need for high flow oxygen, the picture changes dramatically.

Implications for Practice: Carefully defining PPCs and maintaining a consistent definition is necessary to properly investigate this phenomenon, to monitor facility rates of PPCs over time, and to develop quality improvement initiatives to combat the rise in rates. Measuring a low prevalence outcome such as pneumonia may be insufficient to properly understand the true incidence rate of PPCs in our hospitals. The study findings should prompt additional well-designed studies with clearly defined outcome measures to identify unknown risk factors driving the increase in PPCs.

Use of Wearable Technology to Monitor Health of Elders in Japan

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Background: With 24 million Japanese elderly aging at home, the challenges of managing chronic conditions are significant. As many of Japan's elders manage multiple chronic conditions, investigating the usefulness of wearable health devices for this population is warranted.

Purpose: The purpose of this study was to explore the perspectives of Japanese elders, their caretakers, and their healthcare providers on the use of technology and wearable devices to monitor health conditions and keep Japanese elders safe at home.

Methods: Using a qualitative approach, a community advisory board was first established to guide the development of a semi-structured interview guide for subsequent focus group sessions. In total 21 persons participated in focus group sessions, of whom 7 were the elders, 3 were general nurses, 3 were public health nurses, 2 were physicians, 6 were physical therapists, care managers, and occupational therapist. Inclusion criteria included the client being age 65 or older, and the ability to freely communicate perspectives on health. The healthcare personnel were in their role for at least six months and were able to share perspectives about the current health environment in Japan. In total, 6 focus group and 2 one-on-one interviews were conducted. Informed consent was obtained.

Content Analysis: After the recordings were transcribed in both Japanese and English by DeepL Pro; each transcript was first reviewed by the team in its entirety. Thereafter an inductive approach was followed that drew from Grounded Theory. The research team then used "in vivo" coding to generate exact phrases from a participant's response, which were placed into an Excel file. Two independent members of the team conducted line-by-line coding via first cycle coding. Discrepancies in first cycle coding were discussed until achieving agreement. Thereafter the team conducted second cycle coding, while reviewing clusters of data for similarities and differences, leading to the development of categories and subcategories. Finally, using the Excel files, selected quotes and their associated codes were developed. Data saturation was determined to be achieved as the last participants were interviewed. Rigor of the iterative, data analytic process was ensured by trustworthiness of data (i.e., credibility, confirmability, transferability, and dependability.

Results: Four major themes emerged from the analysis: 1) Characteristics of Elderly Most Vulnerable and Challenges in Being Monitored Accurately; 2) Current Use of Monitoring Technology and Curiosity about Use of the Latest Digital Technology to Keep Elderly Healthy at Home; 3) Perceived Advantages of Wearing Technology; and 4) Perceived Disadvantages of Wearing Technology. Many of the elderly participants were interested in using monitoring devices at home, particularly if not complicated. Healthcare workers found monitoring technologies particularly useful during the isolation of the COVID-19 pandemic. Elderly participants felt cost and technical issues could be barriers to using monitoring devices.

Conclusions: While there are challenges to utilizing monitoring devices, elders and their providers weighed the pros and cons of wearing technology to keep elders safe at home. These findings have potential to aid the aging population of Japan and justifies further investigation into the effectiveness of these devices.

Using a Cardiac Wearable Device to Prevent PTSD Following ICD Shock: A Pilot Study

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Purpose/Aims: This pilot feasibility study evaluated a novel heart rate (HR) self-monitoring intervention to prevent the development of post-traumatic stress disorder (PTSD) following implantable cardioverter defibrillator (ICD) shock. Specific study aims were to: 1) Assess feasibility, acceptability, and safety of a HR monitoring intervention during the first month, post-ICD shock; and 2) Describe intervention effects including ICD shock anxiety, PTSD symptoms, daily physical activity, self-efficacy, and salivary and hair cortisol levels.

Background: The ICD is standard treatment for the prevention of sudden cardiac arrest. The device delivers shocks that terminate potentially fatal ventricular tachyarrhythmias. Often occurring without warning, ICD shocks cause pain, musculoskeletal contractions, autonomic activation, and psychological distress characterized by anxiety, hypervigilance, and avoidance behaviors. This study addressed a critical need in post-ICD care by determining the feasibility and acceptability of a self-management, cost-conservative intervention to reduce post-ICD anxiety, enhance return to activities of daily living, and prevent PTSD.

The 4-week Self-Paced Self-Monitoring (SPSM) intervention was designed to promote HR self-monitoring during exercise, regulate physiological arousal and emotional responses, gain insight into HR, and build confidence in being physically active. The HR self-monitoring intervention was implemented using telephone/internet-based self-monitoring with a Polar M200^{TM} monitor/Flow Service and weekly nurse coaching.

Approach: A one-group, single-site pre-post design (n=10) was used to describe (graphic analysis, t-tests, ANOVA) intervention impact on measures of ICD shock anxiety, PTSD symptoms, physical activity (StepWatch^{TM}), self-efficacy, and ANS activity (cortisol). Feasibility and acceptability were assessed with process data and two-coder content analysis of interview data.

Findings: *Sample.* Ten males (90% Caucasian, mean age 58 years, 78% employed), with an ICD (EF < 35%; 56% secondary prevention; 55% prior ICD shock) completed the 1-month intervention.

Feasibility/Acceptability/Safety. SPSM, implemented within a week of the shock, was convenient and low-cost. Retention at one month was 100%, with participants completing all study aspects. The nurse-led coaching was described as a key intervention component, promoting confidence and safety to increase physical activity, and "*peace of mind.*" There were no major adverse cardiac events.

Efficacy. After the SPSM intervention, ICD shock anxiety (20.22±6.9 to 15.78±6.0, p< 0.02) and PTSD symptoms (7.44±8.78 to 4.0±5.29, p<0.03) declined significantly. Physical activity (steps/day) remained stable, increasing slightly (7579.3±3190 to 7816±3425.1, p<0.39). Self-efficacy increased marginally (50.11±10.39 to 52±9.79, p<0.10). Salivary cortisol (acute stress) declined (0.035±0.020 to 0.023±0.007, p< 0.052). Post-intervention hair cortisol levels (chronic stress) were consistently low. Effect sizes for key outcomes ranged from medium to large (0.44-0.88).

Conclusion: The SPSM intervention was feasible and acceptable, resulting in significant reductions in distress (anxiety, PTSD symptoms, cortisol). Short-term, well-timed stress management interventions have the potential to prevent more complicated and costly PTSD post-ICD shock. Future research will refine and test the efficacy of this technology-based HR self-monitoring intervention with larger and more diverse samples.

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Integrated Heart Rate Variability Biofeedback and Digital Storytelling Intervention

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Background: Hematopoietic cell transplantation (HCT) is a potentially life-saving treatment for many hematologic malignancies, such as lymphoma and leukemia. However, patients undergoing HCT suffer psychological distress due to the rigors and multiple sequelae of treatment. Infection-control protocols and distances between transplant centers limit in-person psychological services. To overcome these barriers, our research team previously developed a novel digital storytelling (DST) intervention, showing preliminary efficacy in reducing distress. Given that heartrate variability (HRV), a measure of autonomic nervous system (ANS) balance, was associated with better outcomes in response to DST, we developed an integrated DST with heart rate variability biofeedback (HRVB) to further support emotional processing. HRVB is an evidence-based, non-invasive, mHealth intervention, designed to help people in emotional self-regulation using visual/auditory feedback to slow breath rate, focusing on positive emotional contexts to improve HRV coherence and ANS balance.

Purpose: We conducted a two-group, remotely-delivered, 2-week pilot randomized controlled trial with the primary aim to examine the feasibility of an integrated intervention (DST+HRVB). We also examined if an integrated intervention would achieve improved nervous system balance (i.e., coherence) among post-HCT patients compared to DST alone, by analyzing pre- and post-intervention HRV data.

Methods: Adult HCT patients were enrolled post-HCT and randomly assigned to (1) DST+HRVB or (2) DST-only. Both groups remotely viewed four emotionally rich digital stories (3-5 minutes each) weekly. The integrated group received HRVB training and practiced it 10 minutes per day at home. Outcome measures include HRV parameters such as standard deviation of normal to normal (SDNN), root mean square of successive differences (RMSSD), and normalized coherence. Data were collected at baseline and post-intervention (2-week). In this pilot study, we focus our results on estimates of standardized between-group differences (Cohen's d) in Δs when describing intervention effects on outcomes.

Results: Of the HCT patients (N= 40), 25 patients were eligible (M age = 51.9 years), 13 patients were randomized to DST+HRVB and 12 patients to DST-only. The majority of participants were male (60%), White (76%), married (64%), and unemployed (52%). Participants in the integrated group completed an average of 106 minutes of HRVB practice (mean =7.57 minutes per day), indicating compliance. In terms of HRV-assessed ANS balance (assessed using HRV normalized coherence; d = .55), the integrated group showed a notable improvement with an increase of 3.5 from pre- to post-intervention, while the traditional group increased by only 0.9. Time-domain HRV parameters (SDNN d =.39 and RMSSD d =.50) increased in the DST+HRVB group but decreased for the DST-only group.

Implications and Significance of the Study: This pilot study supports the feasibility and preliminary effects of the integrated intervention in promoting HRV coherence among HCT patients. Moreover, this remotely-delivered intervention maximized reach, dissemination potential, and provides infection prevention advantages, made it suitable for HCT patients. The results resonate with previous findings, suggesting HRVB's role in emotion regulation and its potential to alleviate psychological issues. Future studies should test this intervention's applicability in other cancer patient groups to reduce treatment-related stress and improve HRV coherence.

Funding: Institute for Social Science Research at Arizona State University. (Grant #: PG12840; Clinicaltrials.gov ID: NCT04275830)

INNOVATIONS IN TECHNOLOGY

The Use of AI Chatbots for Anxiety, Stress, and Depression: A Scoping Review

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Background: Anxiety and depression are the leading causes of global health-related burden and both have increased dramatically since the 90s. he prevalence in the US is almost twice as high at 8.3% or 21 million adults experiencing at least one depressive disorder and is highest among individuals aged 18-25 (18.6%). Access to mental health services is difficult for several reasons: lack of transport or proximity to mental health services, shortage of providers and/or therapists, and cost. Only 44.8% of US adults aged 18 or older with any mental illness received mental health services in the previous 12 months and 46% of those surveyed either know someone who has, or they themselves have had to travel for more than an hour to get to and from recent appointments for mental health care. Delivering mental health care using artificial intelligence (AI) chatbots may be one option for closing the gaps for mental healthcare access.

Aim: The overall aim of this scoping review was to determine the effects of using AI chatbots for anxiety, stress, and depression.

Methods: PubMed, PsycINFO, CINAHL, and Web of Science databases were searched. When possible, Medical Subject Heading (MeSH) terms were searched in combination with keywords.

Outcomes/Results: A total of 5,768 abstracts were reviewed by two independent reviewers. Fifty-four articles were chosen for further review, with a total of 16 articles included in the final analysis. The majority of the studies (n = 12) used a quantitative design and four studies used a mixed methods design. Regarding quality assessment, the overall quality of the evidence was lower than expected. Overall, the majority of studies showed positive trends in anxiety, stress, and depression. However, more than half of the included studies did not have safety guardrails in place for high-risk situations, such as suicidal ideation and only a 31% of the studies identified protocols for identifying and responding to such situations. Further, privacy and security risks were rarely addressed.

Conclusion/Implications: Overall, using an AI chatbot for anxiety, stress, and depression has some promising effects. It may be a helpful tool to provide mental health services to people who otherwise, would not receive any treatment. However, it should be used with caution and not replace treatment by a provider/therapist when possible. In addition, the studies examined in this review found varying versions AI technology. Many of the studies were done using rudimentary versions of AI chatbots, which may have caused mixed results. In addition, the negative effects, such a relationship development or dependence need to be further investigated.

Postpartum Health Behaviors and Weight Are Associated with the Social Environment

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Purpose: Among a racially/ethnically diverse postpartum sample: 1) investigate associations of social-network characteristics (IVs) with diet, activity, and weight (DVs); 2) explore participants' perceptions of social norms/influence on health behaviors; and 3) connect participants' insights about norms/influence to quantitative findings in order to explain/extend results.

Background: Three-quarters of women weigh more at one year postpartum than before pregnancy; nearly 50% retain more than 10 pounds; 25% more than 20. Weight retention is associated with increased morbidity risk, such as cardiometabolic disease. Individual-level factors such as diet and activity have often been the focus of postpartum health-behavior research and rarely have researchers used multilevel/domain approaches, such as a focus on the social environment, to understand the problem.

Methods: Eligibility criteria were: biological female, aged 18 or older, 12-15-months postpartum, and pre-pregnancy BMI≥25. We used an explanatory-sequential mixed-methods design. Demographic, dietary, and activity data were collected through a REDCap survey and social-network data were collected in one-on-one structured interviews. We used a stepwise regression approach to assess network-level predictors for each outcome (i.e., diet, activity, weight). We generated network visualizations, and these guided one-on-one semi-structured interviews. Content and thematic analysis of interview data described women's perceptions of the influence of their relationships on health behaviors. Mixed-methods procedures included creating a correlation matrix of social-network and outcome data to create the qualitative sampling frame. Mixed-methods data integration was done through the pillar-integration process.

Results: A total of 100 women completed the study; 38% returned to their pre-pregnancy weight by one year. We found multiple significant findings in multivariable models, for example, as total dietary fat per day increased, the proportion of healthy diets among (p=0.015) and encouragement from (p=0.012) network members decreased, while the proportion of inactivity among network members increased (p=0.005). We developed three overarching themes about the social environment's impact on participants: social norms and influence impacted health behaviors and body image (e.g., family engagement in sports fostered continued athleticism in adulthood among participants); network difficulty impacted health goals (e.g., frequent family gatherings around food and family pressure to overeat); and social support impacted postpartum health (e.g., companionship support for shared physical activity). Mixed-methods analysis revealed that women who were able to articulate how social relationships created difficulty for the attainment of their health goals were less likely to retain weight postpartum (62.3% vs 37.7%). Additionally, women who did not retain weight reported more of all types of social support [appraisal (59.5% vs 40.5%), companionship (55% vs 45%), emotional (61.6% vs 38.4%), informational (54.4% vs 45.6%), and instrumental (59.4% vs 40.6%)].

Conclusions: Understanding the impact of social environment on postpartum health behaviors and weight is an essential first step in approaching the problem from a multilevel/domain approach. Healthcare providers should focus on postpartum health indicators other than weight; they should talk to individuals about their health priorities and provide targeted resources to support those goals. Researchers and public-health officials wishing to promote healthy postpartum behaviors should focus on family and child health, rather than solely on maternal weight and health behaviors.

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Peppermint Oil Vapor to Relieve Postpartum Urinary Retention

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Purpose: To relieve postpartum urinary retention (PUR) and decrease reinsertion rate of urinary catheters following vaginal and Cesarean Section (CS) deliveries among women in the postpartum period.

Background: About 5.3% of women suffer from PUR following delivery. PUR decreases comfort, leads to bladder neuromuscular damage and urinary dysfunction, and increases reinsertions of urinary catheters. PUR is defined as the inability to pass urine spontaneously or documentation of post void residual urine volume of more than 150 mL of urine in the 6 hours after delivery or 3-4 hours of removing a urinary catheter (UC). Peppermint (Mentha x piperita L.) is a natural sterile hybrid of water-mint and spearmint. Available evidence suggests that peppermint oil vapor (PMOV) may decrease acute urinary retention in the postsurgical patients.

Implementation: The IHI PDSA model guided the implementation of this QI project at the postpartum unit in a southern California Magnet hospital. The project leader trained the nurses to identify eligible candidates and to implement the PMOV exposure intervention, instituted tracking and monitoring of PMOV usage, created a workflow diagram to integrate the PMOV exposure in the workflow of nurses within the clinical guidelines, and audited the documentation of the outcome after PMOV intervention. Eligibility criteria included inability to pass urine spontaneously and urine volume measurement of 300-600 mL using the bladder scanner after removal of UC. The intervention involved placing 2 mL of PMOV in the urine hat to expose a woman’s perineum to peppermint oil vapor for 15 minutes. An exempt determination was obtained from the facility’s Clinical Research Office prior to implementation.

Outcome Measures: The main outcomes included whether spontaneous voiding or catheter reinsertion occurred after PMOV exposure. The mode of delivery and time between removal of UC and administration of PMOV were tracked.

Findings: The intervention was completed in 118 women. Half of the women involved in the PMOV intervention had CS deliveries (n=53). The PMOV exposure relieved PUR in 58% (n=64) of all the women who were exposed to the intervention (n=118). Most women were able to void within 10 minutes of the application, those who had a delayed but complete void passed urine within one hour of the application. Chi Square analysis showed a statistically significant difference in the rate of urinary catheter reinsertion between those who responded to PMVO (reinsertion of catheter rate 6%), and those who did not (reinsertion rate 79%), $\chi2=59.5$, $p<.001$.

Conclusions: The use of PMOV promotes spontaneous voiding and spares women from UC reinsertions in the postpartum period. PMOV potentially decreases UTIs associated with UC insertions and saves the money, labor, and time involved in UC reinsertions. It also promotes patient comfort and their experience and mobility. The PMOV application was integrated in the workflow of nurses in the unit and was added to the bladder management protocol and the policy and procedures for Postpartum Care at the facility.

Recommendations/Future Research: Given the positive effects noted above, the effect of PMOV application on urinary retention in other postsurgical patients should be further explored.

Associations between Pressure for Birth Procedures and Respectful Perinatal Care

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Research Aim: To examine associations between pressure to have obstetric interventions—including unplanned operative delivery, induction, episiotomy, medication for pain relief, continuous electronic fetal monitoring (any, count)—and women's experiences of respectful maternity care.

Background: Harm has been reported by birthing people (hereafter women) in the US as perinatal mistreatment, and one aspect of mistreatment is disrespect. Respect is fundamentally important to safe, quality care and disrespect is a known barrier to future care access. Women reported experiences of pressure to accept certain procedures during previous studies, which raises ethical questions. In the groundbreaking "Giving Voices to Mothers" study, the most common procedures women reported being pressured into accepting were continuous fetal monitoring (24%), medications to start or speed up labor (13%), a Cesarean (11%), and epidural anesthesia (7%) (Vedam et al., 2019). Clarifying these associations, and the relationships between pressure to have unplanned obstetric procedures and respect can support nurses to promote respect during perinatal care.

Methods: This study was an exploratory analysis of data from a survey conducted in the US from 2010 to 2016 called the "Giving Voice to Mothers" conducted online in 2016-17 (GVTM;https://www.birthplacelab.org/wp-content/uploads/2022/06/Giving-Voice-to-Mothers-Study.pdf, accessed January 18, 2023). The original data were collected by a community of researchers, clinicians, community members and oversampled to include communities historically excluded from research, midwifery births, and community births. This sample was a secondary analysis from the original data set, including women who were over 18, and excluding women planning an elective Cesarean section. The independent variable was pressure to have any (and total count) specific obstetric procedures. Respect was measured by the Mothers on respect (MORi) score, a composite of 14 questions (Vedam et al., 2017). Multivariable linear regression was used to model MORi scores as a function of respect "any/count", controlling for important sociodemographic and health related confounding variables.

Results: Pressure to have obstetric procedures (any/count) was associated with lower MORi scores (i.e., less respect). Any pressure to have obstetric procedures was associated with a 9-point lower MORi score (-9.05, p=0.000, 95% CI: -10.24, -7.85); each additional procedure for which pressure was reported was associated with a 4-point lower MORi score (-4.25, p=0.000, 95% CI: -4.67, -3.82). Other covariates associated with higher MORi scores were maternal age > 40 (p<0.05), as well as prenatal provider as midwife (p=0.00).

Conclusions: The strong, consistent associations between pressure to have obstetric interventions and respect underscores the importance of communication during perinatal care. Nurses are ideally positioned to implement innovative, ethical solutions to improve education and communication.

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The Relationship between Restrictive Regulation of Midwives and Professional Burnout

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Purpose: To investigate the relationship between state-level policies that restrict midwives' autonomy and burnout, and the potential mediating role of the practice environment, among certified nurse-midwives and certified midwives (CNM/CMs).

Background: The US is experiencing a shortage of maternity care providers with 39.8% of counties not having a single midwife or obstetrician. Burnout is both a cause and consequence of workforce shortages. Burnout is associated with nurses leaving the workforce and resulting nurse staffing shortages lead to more burnout. An estimated 40.6% of CNM/CMs are experiencing burnout. Internationally, burnout among midwives has been associated with lack of control and autonomy. In almost half of US states (23 states), midwives' autonomy is systematically restricted through state-level policies that limit the scope of practice and the independence of midwives to practice to the full extent of their training. Guided by the socioecological model, we hypothesized that restrictive regulation at the state level was associated with increased burnout, and that the practice environment, at the meso-level, potentially mediated that relationship.

Methods: We conducted an online survey study in spring 2022 of midwives practicing in 3 states where midwifery autonomy is restricted (NC, PA, GA; N=1600) and 4 states without restrictions (NM, CO, OR, WA; N=1552). A convenience sample was recruited through professional organization social media, professional networks, and snowballing. In addition to collecting state regulatory environment, instruments included the Maslach Burnout Inventory emotional exhaustion subscale (MBI-EE) and the Midwifery Practice Climate Scale (MPCS). To test the proposed relationships, we utilized model four of Hayes' PROCESS macro (Hayes, 2018), using ordinary least squares (OLS) regression-based path analysis with bias-corrected bootstrapping method. Mediation was considered statistically significant if the indirect effect between regulatory environment and burnout through the mediator included 95% confidence intervals not including zero- indicating a p-value of at least less than .05.

Results: A total of 248 midwives completed the survey (119 autonomous and 129 restrictive states). The relationship between regulatory environment and MBI-EE was not statistically significant (b= .012, p=.935). Regulatory environment was significantly associated MPCS (b= -.238, p=.025) and MPCS was significantly associated with MBI-EE (b= -.815, p<.001). However, the indirect pathway from regulatory environment to MBI-EE through MPCS had an indirect and statistically significant effect (b= .195, p<.05) with a low and high 95% confidence intervals of .023 and .381, respectively. The total effect of the model was .207, with the indirect effect accounting for .195 of the variance. In other words, the mediator account for approximately 94% of the total effect of regulatory environment on MBI-EE, which helps explain the null finding of the relationship between regulatory environment and MBI-EE.

Conclusion: Our findings suggest that removing state-level restrictions alone is not a pathway midwife burnout prevention. Efforts must include interventions aimed the practice-level— specifically the practice environment. Strategies include effective leadership and midwife participation in key organizational activities, such as clinical guideline development. The relationship between state-level regulatory environment and practice environment, including directionality and the mechanism of the relationship, demand further investigation.

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Obstetric Violence in US Maternity Care: Findings from the Break the Silence Campaign

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Purposes/Aims: The aims for this study were to: (1) Examine the naturally occurring textual content on obstetric violence experiences from the Break the Silence social media campaign as a source to make the problem visible in the US maternity care system; (2) Use a systems approach for a comprehensive view of the multidirectional structure, processes, and outcome of obstetric violence as it is situated in the US maternity care system; and (3) Examine how the AWHONN Respectful Maternity Care (RMC) recommendations for practice can work to mitigate and prevent obstetric violence as portrayed in the experiences of those whose signboard messages are posted in Break the Silence.

Rationale/Background: Obstetric violence is a gendered, sex specific form of violence against women that has been globally recognized as a violation of human rights. The occurrence of obstetric violence fits the definition of a systems problem, wherein maternity care systems do not reliably produce the desired outcome of a positive birth experience. This study fills a research gap where there are no known studies that have examined the meaning of obstetric violence in US maternity care, specifically as described by birthing people from a naturally occurring source. Increasing knowledge about obstetric violence in the US context can work to improve the persistently poor clinical and experiential outcomes in US maternity care that fail to meet recommended standards.

Methods: Krippendorff's qualitative content analysis methods were used to illustrate the meaning of obstetric violence in the US maternity care system using the naturally occurring sample of obstetric violence experiences posted on the Break the Silence campaign. A final layer of analysis was undertaken to examine how the Association for Women's Health, Obstetric and Neonatal Nurses' (AWHONN) recommendations for respectful maternity care could mitigate and prevent obstetric violence using the experiences of participants from the Break the Silence campaign as examples.

Findings: Results from this qualitative content analysis illustrate the meaning of obstetric violence in US maternity care with four themes: 1) pregnancy and birth continuum as a battle with healthcare providers and the healthcare system, 2) sacrifice of the maternal body normalized and assumed as a gender stereotype in pregnancy and childbirth, 3) disrupted rites of passage for childbirth and new parenthood, and 4) abuse of fiduciary power by healthcare providers. In addition, the final layer of analysis determined that there is a logical tautology between the AWHONN recommendations for RMC and the obstetric violence experiences from this sample. Simply put, RMC does not equal obstetric violence.

Conclusions: The impact from increasing knowledge about the interpersonal and structural problem of obstetric violence can provide new insights for improving persistently poor and inequitable outcomes in US maternity care. The discipline of nursing is positioned to take a leadership role in the continued advancement of obstetric violence research, education, practice improvement, and systems change. The AWHONN RMC framework is nurse-led and recognizes the multilevel factors that influence obstetric violence along with the importance of RMC being translated for implementation across the interdisciplinary maternity care continuum.

Racism's Impact on the Well-Being of Nurses of Color: A Review of Qualitative Literature

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Aim: This scoping review examines the evidence in available qualitative literature addressing the impact of racism on the well-being of nurses of color in the United States.

Background: As the US population becomes more diverse the nursing workforce should reflect evolving demographics to foster culturally sensitive care. However, only a small fraction of the nursing workforce are individuals of color, underscoring a significant disparity. Nurses of color in the US are likely to have unique insights and awareness that not only enhances patient care and quality outcomes, but also bolsters leadership and diversity, and contributes rich perspectives in academia.

Nonetheless, nurses of color often navigate a minefield of racial biases and systemic barriers. The nursing profession is not insulated from the challenges of racial microaggressions and direct, vicarious, and structural racism. While substantial literature acknowledges these challenges, there remains a dearth of research concerning the tangible impact of racism on the well-being of nurses of color. These racialized experiences can amplify the inherent stresses of nursing, potentially jeopardizing nurses' physical and psychological health, and impeding recruitment, retention, and professional advancement of nurses of color.

Methods: Using Joanna Briggs' Scoping Review Methodology and PRISMA-ScR reporting standards we searched 8 databases in May and September of 2023. Studies were included in this review if: 1) the study sample included nurses (nursing assistants and licensed nurses); 2) addressed physical or mental health impact of racism on nurses of color; 3) presented empirical qualitative research; 4) was published in English; and 4) was conducted in the US. Twenty-three studies met inclusion criteria. Publications included 1 thesis, 4 dissertations, and 18 journal articles. A quality review was done on each article.

Findings: Experiencing racism was associated with the well-being of nurses of color. Predominant emotions identified across studies included feeling isolated, marginalized, alienated, and emotionally distressed. Such emotions frequently extended to feelings of insecurity, perception of being "less human," and facing constant judgment, especially in the face of racial microaggressions. The emotional burden of racism is significant, described by many participants as exhausting, draining, and at times leading to physical health issues due to stress. Nurses of color often described feeling as if they had to justify their presence in the workplace. Collectively, the pervasive impact of racism hadn't just evoked immediate emotional responses, but shaped nurses' broader sense of safety, value, and belonging within their professional environment.

Implications: To support workforce diversity and ensure the well-being, retention, and contribution of nurses of color, organizational and policy interventions are needed including: Implementing diversity, equity, and inclusion training in nursing education and professional development; fostering an inclusive environment that addresses implicit biases; promoting transparent recruitment and advancement procedures; encouraging open dialogues on racial disparities in healthcare; and adopting policies that actively combat racism in patient care and workplace dynamics. Addressing these issues supports workforce diversity and ensures the well-being, retention, and contribution of nurses of color.

Determinants of Life Satisfaction in a Crisis: A Mixed Methods Study

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Purpose/Aims: Our approach in this study was to identity/isolate the **most salient factor(s)** associated with resilience using a **quantitative approach**, and then to identify the most salient factor(s) associated with resilience using a **qualitative approach**. Then the aim was to conduct an **integrative mixed methods analysis of both results**, to examine associations between persistence and social support, the two most salient factors. An **integrative (QUAN+QUAL) joint display mixed methods analysis** was used to interpret these results with implications for the delivery of clinical nursing care. The research question we examined was, *“In what manner are these expressions of resilience, social support and persistence, associated with lower versus higher levels of life satisfaction?”*

Background/Rationale: This study stemmed from a prior study that analyzed the occurrence of resilience in individuals who experienced a health and/or family related crisis. Within the prior study, two of the most salient types of expressions of resilience were identified as *social support* and *persistence*. From this background, the rationale for the current study was to further examine life satisfaction and analyze how social support and persistence associated with life satisfaction may aid in better understanding the complex and often elusive construct of resilience.

Methods: This mixed methods study conducted a secondary data analysis of: (a) results of a regression model analysis of select variables to identify strongest predictors of Connor Davidson-Resilience Scale, and (b) a qualitative data analysis from interviews of participants coping with a highly stressful health/family problem, to identify the most salient types of “expressions of resilience.” In this convergent mixed methods (cross sectional) design, we examined data in two phases and this may be regarded as a modified sequential explanatory design. Phase 1 (quantitative analyses) and Phase 2 (qualitative analyses) were examined in Joint Display tables to conduct storyline analyses of the salient “expressions of resilience” which were *persistence* and *social support.*

Outcomes Achieved: Quantitative findings showed that Life Satisfaction emerged as the most significant predictor of resilience with a standardized regression coefficient BETA = .51, p.<.001. A prior 2 x 2 crosstabulation analysis showed an interaction effect and indicated an unequal distribution of mentioned and non-mentioned by each of the themes of **persistence** (chi square = 5.69, p. < .05) and **social support** (chi square = 10.47, p. = .001). Qualitative findings from the storyline analysis showed family and friends as major sources of **social support** for participants with high life satisfaction compared to professional support with participants having low life satisfaction. The high life satisfaction group expressed commitment and choice (their choice or no choice but to persist) while the low life satisfaction group expressed focus/drive and personal choice as components of persistence with resilience in dealing with their crisis.

Conclusions/Recommendations for Future Undertakings: Life satisfaction can be enhanced by promoting social support from family and friends as well as by commitment and choice in persistence in coping with a crisis. As nurses, we can undertake future research that studies clinical implementation and educational interventions that promote social support and persistence.

When Are Nurses Using Cannabis in Relation to Patient Care?

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Purpose: The purpose of this study was to describe nurse cannabis use and other substance use and explore patterns of cannabis use in relation to patient care.

Background: Over 5.1 million of the 49 million cannabis users use it for medical purposes. Medical cannabis is legal in 48 states, DC, Guam, the US Virgin Islands, and Puerto Rico, while recreational use is legal in 24 states. However, it is still illegal on the federal level. Nurses are at risk for substance abuse because drugs are easy to access, stress is high, and drug use is stigmatized. The COVID-19 pandemic has increased stress, anxiety, depression, fatigue, and burnout in nurses, but its effects on cannabis and other substance use levels and in relation to patient care are unknown.

Methods: A cross-sectional survey of nurses (n=1,010) on substance use and timing of use in relation to work shifts was conducted. The inclusion criteria for participation in the survey were: 1) licensed as a registered nurse (RN) in the United States; 2) practicing in a direct patient care role, and 3) working full- or part-time (an average of eight or more hours per week). Recruitment was carried out between November 2021 and June 2022 through social media and email listservs. The survey included 1) participant demographics; 2) general substance use was assessed through the Tobacco, Alcohol, Prescription Medication, and Other Substance Use Tool, Cannabis Use Disorder Identification Test-Revised, and Alcohol Use Disorders Identification Test – Consumption; and 3) prior week use and work hours recall to assess the timing of use in relation to patient care. Descriptive analyses were used to describe substance use quantities and timing in relation to work shifts among participants.

Findings: The demographics of participants (n=1,010) were similar to the overall RN population as described in the National Council of State Boards of Nursing’s 2022 Report. In the prior 3-month period, 77% of respondents reported drinking an alcoholic beverage, and 25% reported cannabis use. Across the 248 respondents who reported cannabis use in the last 3 months, 158 (63.71%) reported use in the prior seven-day recall period. Of those, ninety-one respondents reported use on a workday and provided cannabis use information about 263 workdays in the prior week. The most common use pattern across workdays (n=263) was after work only (81.37%).

Implications: Nurses in our study reported using cannabis at rates like estimates of use in the general US population. This study suggests that this use is generally occurring after work. Factors contributing to nurse substance use after work can be further explored. Organizational leaders and regulators can use the findings of this study to guide the creation of policies related to cannabis use as the legality changes on the statewide and national levels

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Research Recruitment and Retention for Health Equity Studies

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Purposes/Aims: The aim was to examine strategies to motivate research participation and retention among minoritized participants in a mental health equity study.
Rationale/Conceptual Basis: Research recruitment and retention of racial and ethnic minoritized participants remains a challenge. Minoritized individuals comprise 10% of clinical trial participants, undermining the validity, generalizability, and utility of research findings. Strategies are needed for diversity in research participation. An approach is to explore the processes that motivate participation. A theory with concepts to capture the *processes that occur over time and have a sense of flow and movement* is the Nursing Transition Theory. Properties and responses to transition outlined in the theory offered guidance for assessing conditions that lead to research recruitment and retention.
Methods: A secondary analysis was conducted of interviews taken from the PARTNER-MH study; a pilot randomized controlled trial (NCT04515771). The study examined feasibility of a peer-led patient navigation intervention for minoritized patients in Veterans Health Affairs mental health settings.
Data Collection: Data were collected from PARTNER-MH interviews. Among the 19 interview questions, one asked *"what made you sign up for the study?"* and another *"what kept you engaged?"* Responses to the recruitment and retention questions were collected.
Analysis: Properties of transition, and responses to transition in the Nursing Transition Theory framed the analysis. When applicable, responses to the recruitment question were deductively coded with the properties of transition, and responses to the retention question with the responses to transition.
Definitions of Properties
Time Span- Period a transition commences, progresses, and concludes.
Awareness – Knowledge about transition intentions.
Engagement- Intentional involvement in the transition goals.
Changes – Movements in nature, temporality, severity, value, expectations.
Critical Points – Fluctuations which propel transition.
Definitions of Responses
Feeling Connected – Relationships formed during the transition.
Interacting - Active participation with transition goals.
Being Situated - An arrival, presence, in the new state.
Developing Confidence, Coping – Signs of adjusting and thriving in the new state.
Assessment of Findings: Of 18 eligible, (n=13) Veterans were interviewed for the PARTNER-MH study, (n=10, 77%) were Black, (n=9, 69%) male, and (n=9, 69%) had some college education. Twelve Veterans were directly asked the recruitment and retention questions.
Responses to the recruitment question could be coded with a property of transition in (n=10, 83%) of the interviews, and responses to the retention question could be coded with a response to transition in (n=9, 75%). The predominant code deducted from the recruitment responses was, engagement (n=8, 67%), and from the retention responses was, feeling connected (n=6, 67%).
Engagement-coded responses addressed intentions to advance conditions for minoritized Veterans, as was the PARTNER-MH aim. Feeling connected responses credited the peer relationship, separate from the mentoring tasks, for retention.
Conclusions: Aligned intentions, and bonds formed during the study were predominant recruitment and retention motivators.
Implications: With reservations due to limited scope, results are recommended for health equity studies. Application of the Nursing Transition Theory warrants further exploration as a strategy for studying minoritized persons' recruitment and retention motivators for race-neutral health research.

Strategies for Alleviating Moral Distress through Chaplain Care

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Background: Healthcare workers frequently experience occupational stressors that negatively impact their emotional well-being. Recent evidence suggests that healthcare workers' occupational stressors may translate to moral distress, defined as emotional turmoil occurring over an ethical dilemma secondary to a patient care or team-related issue. Following the COVID-19 pandemic, moral distress and a wide range of psychological and physical issues have been linked to high rates of healthcare worker burnout. Increased occupational stressors significantly augment turnover intentions and behaviors and negatively impact well-being. The resultant turnover rates have reached an all-time high among professional registered nurses. Some evidence suggests that the presence of hospital-based chaplains may alleviate moral distress among healthcare workers.

Purpose: This qualitative descriptive study assessed the perceptions of caregivers in acute care hospital settings regarding the role of hospital-based chaplains in addressing emotional well-being, stress, and burnout.

Methods: A qualitative descriptive research study was designed using the Transactional Theory of Stress and Coping as a sensitizing concept. Patient-facing interdisciplinary healthcare workers were recruited from a larger survey-based study conducted from January 2022 to June 2022 across 31 hospitals within a multi-state, 52-bed hospital system in the Western United States. Participants from the parent study were given the option to electronically consent to schedule and participate in a virtual, 60-minute, 1-on-1 semi-structured interview following survey completion. The qualitative descriptive analysis answered the primary research questions, "How do healthcare workers conceptualize workplace stress?" and, "What impact does speaking with chaplains have on workplace stress?"

Results: A total of 33 healthcare staff participated in optional interviews. Most respondents were registered nurses (76%, n=25) and female (76%, n=25). Findings are presented in three thematic sentences, including: (1) As a result of performing my job duties, I experience moral distress; (2) Because of the stress I am carrying, I seek help from professional chaplains; (3) In small and significant ways, chaplains help to relieve my moral distress. A strategy employed by caregivers for alleviating workplace-induced moral distress and restoring well-being was to seek help from hospital chaplains.

Discussion and Implications for Practice: Interdisciplinary healthcare staff reported experiencing moral distress as a result of their role providing patient care during the COVID-19 pandemic and beyond. Chaplaincy care, common in U.S. facilities for the spiritual care of patients, is an easily accessible resource for healthcare workers. Providing access to chaplains may prove to be an effective strategy for addressing healthcare workers' moral distress and improving emotional and spiritual well-being, thereby reducing turnover and moral distress. Further work is needed in this space to test relationships between healthcare workers' exposure to chaplaincy services, turnover intent, and moral distress.

The Mediating Effect of Social Support on Discrimination and Mental Health in Women

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Purposes/Aims: Our aims were to: 1) describe the prevalence of depression and anxiety in reproductive-aged women during the COVID-19 pandemic; 2) examine associations between discrimination and depression/anxiety; and 3) investigate mediating effects of social support on the associations between discrimination and depression/anxiety.

Background: The COVID-19 pandemic has increased mental health problems in the U.S. Such adverse psychological outcomes may be compounded in vulnerable populations who experience racial discrimination. Past research viewed social support as a buffer (moderator) against stressful circumstances. However, there has been limited research examining the mediating role of social support on discrimination and mental health problems. Furthermore, reproductive-aged women tend to develop depressive/anxiety symptoms more frequently than men.

Methods: Data were retrieved from participants in the All of Us Research program. The inclusion criterion was women aged 18-50 years who responded to the COVID-19 Participant Experience (COPE) survey in the months of May, June, or July 2020. The Everyday Discrimination Scale (EDS) was used to measure discrimination. Depression and anxiety were assessed by PHQ-9 and GAD-7 respectively, with scores of >=10 as the cut-point for depressive/anxious symptoms. Social support was measured by the Medical Outcomes Study (MOS) Social Support scale. Descriptive statistics and mixed-effects modeling analyses were conducted. Covariates included race, ethnicity, income, marital status, health insurance, and mental health history.

Assessment of Findings: There were 13,746 women (mean $[SD]_{age}$ = 38.8 [7.3] years) who completed the COPE survey at least once. Approximately 29% of these women experienced depression and 28% anxiety. Women who identified as mixed ethnicity had high rates of depression (35%) and anxiety (31%) respectively. A higher level of discrimination was significantly associated with greater depression ($b = 0.50$, $p < .001$) and anxiety ($b = 0.44$, $p < .001$). Social support mediated the association between discrimination and depression (direct effect: $b= 0.39$, $p < .001$; mediation effect: $b= 0.11$, $p < .001$; total effect: $b = 0.50$, $p < .001$); similarly, social support mediated the association between discrimination and anxiety (direct effect: $b= 0.37$, $p < .001$; mediation effect: $b= 0.07$, $p < .001$; total effect: $b = 0.44$, $p < .001$).

Conclusions: This study provides evidence of relationships between social support, discrimination, and mental health problems in women of reproductive ages in the U.S. using a diverse and nationally representative sample. The high prevalence of depression/anxiety in women of mixed ethnicity could be related to social and political trauma they might have experienced. The mediating role of social support on discrimination and depression/anxiety indicates that women who face racial discrimination may perceive social support as being less available which is associated with an increase in depression/anxiety. These findings provide insights into the importance of alleviating discrimination and increasing social support as prevention and intervention strategies for reproductive-aged women.

MENTAL HEALTH DISPARITIES

Exploring Healthcare and Mental Health Care Access Among LGBT Populations

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Purpose: The purpose of this project is to: (a) explore the current experiences and needs of the lesbian, gay, bisexual, and transgender (LGBT) population, including health care and mental health utilization, patterns, locations, adequacy of LGBT-friendly health and mental health care providers, and (b) identify gaps in available medical and/or mental health services for LGBT populations in Orange County. According to the National Academy of Medicine, there is limited data on the health needs and health care utilization patterns of the LGBT individuals. There are an estimated 90,000 LGBT individuals over the age of 14 in Orange County. 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. This study will be the first of its kind in Orange County.

Methods: Seventy-five participants were recruited for this quantitative cross-sectional study utilizing a convenience sample from two organizations serving the LGBT community, including an AIDS Service Organization and another providing mental health services. In both groups, the clients are known to access health care and mental health services on a regular basis. An online survey was created using Qualtrics and sent to all active adult patients (age ≥ 18 years). Statistical testing was done to examine descriptive data and to look for differences and similarities within and between racial and ethnic groups, as well as between each of the four LGBT sub-populations – lesbian, gay, bisexual and transgender.

Results: HIV and body weight was most frequently ranked as a top physical health concerns and depression/thoughts of suicide was most frequently identified as a priority mental health issue. Findings also include trouble finding an LGBT competent provider, delays or being unable to access care, worried about losing insurance. Most participants needed to visit multiple different locations to receive care and preferred a one-stop shop.

Conclusions: No known research until now has characterized priority health issues and explored LGBT access to healthcare in Orange County, California. Understanding the healthcare experiences of LGBT individuals and the barriers faced when accessing healthcare informs effective solutions that improve access and quality of care for members of the LGBT community in Orange County, California and beyond. Priority physical and mental health challenges, notably body image and depression were identified, which suggest that more work still needs to be done with this population in these critical health areas.

Attendees in all settings will encounter individuals from the LGBT community. Findings from this study will 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. Providing LGBT culturally appropriate training to healthcare providers would be another future area to explore.

Cost-Related Unmet Mental Healthcare Need Among LGBTQ Young Adults

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Purpose: The purpose of this study was to (1) disaggregate disparities in cost-related unmet need for mental healthcare among young adults (18–35 years) by sexual orientation and gender identity; and (2) to identify drivers of cost-related unmet mental healthcare need among lesbian, gay, bisexual, transgender, and queer (LGBTQ) young adults in the United States (US).

Background: Mental health disorders are up to three times more prevalent among LGBTQ young adults compared with heterosexual/cisgender young adults. Although cost has been identified as a barrier to care for this population, the specific cost-related drivers of unmet mental healthcare need within this population are poorly understood. The Andersen Model of Health Care Utilization offers a conceptual framework to inform identification of predisposing and enabling drivers of unmet need that might be targeted with interventions.

Methods: This study used cross-sectional survey data collected from May 2018 to July 2022 in the All of Us Research Program (v7 data, April 2023), a national health data repository emphasizing recruitment of groups historically underrepresented in research.. Participants were required to have complete outcome data available, as contributing survey data to All of Us was optional. Of the 72,066 survey participants between 18 to 35 years, there were 27,850 who met inclusion criteria The primary outcome was past 12-month unmet need for mental health services due to cost. The primary exposures were cost-related barriers to healthcare plus participant demographics. Chi-square tests were used to assess differences in unmet mental health need, and a multiple logistic regression model to identify specific cost-related barriers associated with unmet mental health need among the LGBTQ subsample.

Findings: There were 6980 participants (25.1%) who identified with a sexual or gender minority category. Nineteen percent (n=5417) reported unmet mental health need. Individuals who identified as LGBTQ had nearly twice the level of unmet mental health need compared to all others (29.8% [n=2081] LGBTQ, 15.9% [n=3336] all others, P<.01), and unmet mental health need was highest among gender minorities (32.9% [n=503], P<.01). Within sexual/gender minority subgroups, Hispanic and non-White participants had higher levels of unmet need (P<.01). Factors associated with higher odds of unmet need were unaffordable co-pays (OR=3.15, 95% CI= 2.63–3.78), high out-of-pocket costs (OR=2.04, 95% CI=1.74–2.39), and caregiving responsibilities for elders (OR=1.81, 95% CI=1.07–3.06). Delaying care due to a lack of concordance with healthcare providers on important social identities was associated with higher odds of unmet need (OR=1.23, 95% CI= 1.13–1.35), while feeling respected by providers (OR=0.87, 95% CI=0.77-0.97) was associated with lower odds.

Conclusions: LGBTQ young adults have higher levels of cost-related unmet mental health need compared with their peers, with the highest levels of unmet need observed among gender minorities and people of color. Our findings suggest a need to address out-of-pocket costs, including co-pays, in mental healthcare for individuals with intersecting marginalized identities. There is also a need to diversify the healthcare provider workforce to reflect patient populations served, including the LGBTQ population, and to ensure provide training in patient-centered, respectful care for LGBTQ individuals.

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Engaging Unhoused People Who Use Drugs to Design Trauma-Informed Person-Centered Care

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Background & Aims: Barriers to accessing substance use treatment abound for many adults in the US, but those barriers increase among people who are unhoused and those in non-urban areas. 92% of Montanans with a substance use disorder do not receive treatment and that number increases for people who are unhoused. Recent studies show that providing treatment at syringe service programs (SSPs) increase access among medically and socially marginalized populations. This study aimed to engage unhoused SSP clients to learn how we might design care to meet their needs and preferences.

Methods: People who endorsed the misuse of opioids and stimulants were invited to take part in a structured interview about their interest in reducing or stopping use, knowledge of evidence-based treatments, barriers they have experienced accessing care, and care design features that might increase their ability to access treatment. Interviews were conducted at an SSP in Montana and analyzed using descriptive statistics and thematic analysis.

Findings: We interviewed 70 people who endorsed the misuse of opioids and 40 people who reported using stimulants. Of all individuals interviewed, 64% identified as white and 26% as Native American; 86% identified as unhoused with half being unsheltered. 56% of respondents had been treated poorly by healthcare staff due to housing status, drug use, or inability to pay for care and 52% avoided seeking care based on past experiences with healthcare staff.

In talking to participants specifically about medications for opioid use disorder (MOUD), we wanted to understand the barriers and facilitators to treatment. 26% acknowledged they weren't ready for treatment and 38% were worried about trading one addiction for another, a common misconception of MOUD. Participants recognized the benefits of MOUD, with 26% of participants looking to decrease their risk of overdose, 30% to decrease dependence on drugs, and 12% desiring to get their life back. 52% of respondents stated they would be interested in MOUD if offered by the SSP.

In speaking to people who use stimulants, participants had a nuanced view of the positive and negative effects of their use. About a quarter of participants reported using stimulants to increase energy, perhaps for work or a lack of sleep and another quarter to cope with ADHD, PTSD, and past or current stressors. Participants also recognized the negative impact of stimulants on family (20%), mental health (15%), physical health (15%), and employment (15%). When asked about interest in decreasing or stopping use, 45% reported being very interested, 25% somewhat interested, 15% unsure, and 15% not interested. About 50% of participants stated that they would be interested in stimulant use treatment if offered by the SSP.

Conclusion: Respondents in our study, the vast majority unhoused, present a complex balance of reasons for use and recognition of the benefits of stopping. Given their previous treatment by the healthcare system, they are understandably hesitant to access care through traditional treatment pathways. SSPs, which have established trust among people who use drugs, represent a feasible pathway of care for this medically and socially marginalized population.

Barriers to Mental Health Treatment Among Spanish-Speaking Immigrants

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Purpose: To identify barriers to mental health treatment among Spanish-speaking immigrants in Southwest Montana using a community-engaged approach

Background: According to the National Alliance on Mental Illness, poor mental health affects 1 in 5 adults and 18% of Hispanics. Due to limitations in Spanish-speaking mental health providers, immigrants may not access health services, preferring to speak to someone in their native language rather than through an interpreter. Immigrants may also 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, a shortage of service providers, and a lack of culturally and linguistically sensitive options. Montana is a rural state with a relatively small but growing Latino immigrant population.

Methods: An interdisciplinary team of nurses and engineers convened a 6-member community advisory board of Latino immigrants: three Mexicans, two Venezuelans, and one Colombian. Based on their feedback that mental health among Spanish-speaking Latinos was not being addressed, we asked them to help our research team understand barriers encountered by Spanish-speaking immigrants around mental health perceptions and treatment. Using a fishbone or Ishikawa diagram, the advisory board classified barriers in six categories: people, environment, policies, procedures, and providers.

Assessment of Findings: Barriers to mental health treatment were found in each category. In the people category, the advisory board identified toxic relationships, stigma, and potential shame from others. In the environment category, they identified the long winters, isolation, and poverty. In the policies category, they identified the discrimination against Hispanics in our community, the lack of paid time off from work, and the inability for people to obtain health insurance. Under procedures, the board noted a lack of time and difficulty knowing where to access services in Spanish. Finally, in the providers category, they identified a lack of Spanish-speaking providers and the cost of care.

Conclusions: We engaged members of the Spanish-speaking immigrant community in an assessment of barriers to mental health treatment which provides a framework for creating solutions aimed at improving access to care. By asking the community itself, we ensure that the findings are representative of the perceptions and experiences of Latino immigrants and empowered the advisory board to become advocates for the mental health needs of their community. Future directions for research include increasing the supply of Spanish-language mental health resources and decreasing stigma and shame.

Implications for Nursing: Nursing working with diverse populations can engage communities in investigating their own health disparities and identifying solutions to address the disparities. Nursing scientists can focus on ways to decrease community stigma and on creative ways to increase mental health services.

Socio-Demographic Disparity Patterns of Perceived Stress and Resilience Among APRNs

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The COVID-19 pandemic, one of the longest-lasting and largest global pandemics in history, has ravaged the world. Advanced Practice Registered Nurses (APRNs) have been playing crucial roles as frontline healthcare providers in detecting and treating COVID-19-infected patients. Previous research highlighted the intense anxiety and stress experienced by frontline healthcare providers during COVID-19, but little literature examined the stress and resilience experienced specifically by APRNs. Furthermore, there is a serious lack of updates on knowledge and socio-demographic disparity patterns of the stress and resilience that APRNs are experiencing during the prolonged COVID-19 period. Examining socio-demographic disparity patterns in stress and resilience levels among APRNs is important because it can help identify vulnerable groups that may require additional support. The purpose of this study was to provide updated knowledge and socio-demographic disparity patterns regarding the perceived stress and resilience among APRNs during the prolonged pandemic period.

This study used a quantitative, cross-sectional, descriptive design. A Qualtrics online survey integrated 14 questions from the Perceived Stress Scale-14 (PSS-14), 25 questions from the Resilience scale, and 10-item demographic questions. Descriptive statistics and Two-Way ANOVA were used for data analysis.

A total of 2412 APRNs who provided direct patient care during the COVID-19 pandemic period at hospitals, clinics, or community settings in the U.S. completed the survey from January to March 2023.

Young frontline APRNs younger than 24 years old had the lowest resilience when facing COVID-19 pandemic. Black/African American frontline APRNs had the highest perceived stress while the American Indian/Alaska Native APRNs had the lowest resilience. APRNs working in primary care clinics perceived the highest stress level. On the other hand, APRNs working in Urgent care have the least resilience. For Years of Practice as an ARNP, APRNs who had less than 5 years of working experience had the highest perceived stress while those with over 20 years had the highest perceived resilience. There is no difference in stress between male and female APRNs, but female APRNs had a significantly lower level of resilience than males.

The results from this study showed that APRN’s stress and resilience have been impacted significantly by the prolonged pandemic and significant socio-demographic disparity patterns of perceived stress and resilience among APRNs working in various clinical settings were clearly identified. Young female APRNs with less than 5 years of experience who work in primary care settings were identified as the most vulnerable APRN groups to have the highest stress level and lowest resilience, which guarantees further interventional studies, for example, mentorship programs by the experienced APRNs to better support them. In addition, further national research and a deeper exploration of the specific contributing individual and sociocultural factors impacting their stress and resilience among APRNs with Black/African American and Native Hawaiian/Pacific Islander backgrounds are needed to provide more comprehensive insights to develop an effective intervention to effectively deal with intense stress and enhance their resilience.

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Understanding Traumatic Stress in Emergency Nurses: A Systematic Review

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Aim: This review aims to understand how emergency nurses experience traumatic stress in the workplace and clarify the impact of traumatic stress on emergency nurses, patients, and healthcare organizations.
Background: Publications involving traumatic stress among nurses and emergency nurses are becoming more common, but no reviews that include both post-traumatic stress disorder and secondary traumatic stress among emergency nurses specifically have been found, thus supporting a systematic review as an appropriate methodology for this question.
Methods: Following PRISMA reporting guidelines, pre-specified inclusion and exclusion criteria were used to screen 339 articles from the Cumulative Index of Nursing and Allied Health Literature, PubMed, and PsycINFO. These databases were searched on 7/13/23 for peer-reviewed articles published in English between 2011-2023. Impacts on the emergency nurse were extracted and categorized into the four domains of post-traumatic stress disorder: intrusion, avoidance, cognition/mood, and arousal, along with an additional fifth domain for symptoms that did not fit into those categories. Impacts on patients and healthcare organizations were extracted. Antecedents and organizational forces were noted as points of intervention to inform policy and prevent/mitigate the effects of traumatic stress on emergency nurses. The Joanna Briggs Critical Appraisal Checklists were used to evaluate quality in cross-sectional and qualitative studies. Both tools were applied to mixed methods studies.
Assessment of Findings: A total of 11 studies conducted in Spain, Scotland, Jordan, The Netherlands, South Africa, Canada, and the U.S. were included for narrative synthesis: 5 quantitative, 4 qualitative, and 2 mixed methods. No studies were excluded based on quality appraisal assessments. All included studies endorsed symptoms of intrusion, avoidance, and arousal. Six of the included studies endorsed symptoms of negative mood/cognition. Other symptoms (e.g., suicidality, tachycardia, depression, emotional detachment, strained relationships) were reported with cumulative and delayed effects across multiple studies. Traumatic stress as experienced by emergency nurses has the potential to impact patient safety and satisfaction, care quality, absenteeism, turnover, and organizational commitment. Identified antecedents included specific populations (e.g., pediatric patients), workplace violence, work environment factors (e.g., lack of trauma-informed leadership, toxic workplace culture), and personal and interpersonal factors.
Conclusions/Implications: Understanding how emergency nurses experience post or secondary traumatic stress reveals serious impacts on nurses, patients, and organizations. Identifying antecedents highlights organizational intervention points to prevent, mitigate, and treat traumatic stress. While some antecedents are not modifiable (i.e., clinical triggers), they could become flags for organizational screening as a form of secondary prevention. Other antecedents like workplace violence and work environment factors (e.g., non-trauma-informed leadership) could be points of intervention for primary prevention programs. The impacts of non-trauma-informed leadership were clear among the included studies in this review and compounded the experience of traumatic stress, perpetuating the "super nurse" stereotype and dysfunctional work environments that harm staff, patients, and organizations. Becoming a trauma-informed organization may have the potential to improve workplace relationships, enhance outcomes, and facilitate healing. Further investigation is needed to see if trauma-informed organizations could impact how emergency nurses experience traumatic stress.

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NURSE WELLBEING

Moral Injury, Moral Resilience, and the Work Environment Among ICU Nurses

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Purpose: To explore differences in Moral Injury (MI), Moral Resilience (MR), and the Healthy Work Environment by generation in ICU nurses.

Background: Millennials (age 28-42) are currently the largest portion of the nursing workforce. Millennials are socially conscious and may be particularly susceptible to factors that threaten their personal values and professional identity. Millennials are leaving their positions in hospitals faster than older generations, prompting administrators to urgently identify factors to improve nursing retention, particularly in hard to fill positions like the intensive care unit (ICU). A recent systematic review introduced an intention to stay model consisting of three factors: Individual (psychosocial), Relational (professional dynamics), and Environmental (organizational culture) that was used as the conceptual framework for this analysis.

The recent COVID-19 pandemic drew considerable attention to the nurse work environment and the moral dimensions of nursing which may influence turnover including MI and MR. Little is known about generational differences in MI and MR (individual factors) or perceptions of the HWE (relational and environmental factors). MI in nurses may develop after violations of one's moral values and beliefs. ICU nurses may be particularly susceptible to MI due to their care of complex patients at the boundary between life and death. MR is the ability to maintain integrity in response to moral adversity. The HWE is a six-standard model created by the American Association of Critical-Care nurses that has been widely endorsed among ICU nurses as the gold standard for healthy work environments. Periodic HWE surveys have consistently demonstrated lower moral distress and turnover intention among nurses working on units that have implemented the HWE standards.

Methods: This was an exploratory, secondary analysis of the parent study, which was a multisite, cross-sectional survey study designed to examine the relationships between MI, MR, and HWE among ICU nurses. For the secondary analysis, descriptive statistics were calculated, and a series of Kruskal-Wallis tests were conducted to detect differences in MI, MR, and HWE by generation.

Findings: 304 participants completed the study. 4.2% Generation Z, 56.7% Millennial, 31.8% Generation X, and 7.3% Baby Boomer.

Kruskal-Wallis tests by generation revealed statistically significant differences in MI [x-squared (2,N=289) = 21.34, $p<.001$], and MR [x-squared (2,N=289) = 18.42, $p<.001$]. MI scores were higher and MR scores were lower in younger generations. There were no differences in HWE by generation.

Conclusions: Millennial and younger ICU nurses experience higher MI and lower MR than older generations. By virtue of younger generations' need to align organizational and personal values, they may be particularly prone to leave their positions in response to moral stressors. It is possible younger ICU nurses – who have not yet developed MR – experience MI sooner than more experienced nurses, leading to an irreconcilable dissonance that can only be relieved by removing themselves from the work setting. Future research is needed to determine how to cultivate MR, prevent MI, and engage younger generations in work environment improvements as strategies to retain ICU nurses and reduce nursing turnover.

Nurse Reactions to Workplace Violence: Reporting and Safety Implications

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Aim: This research aimed to investigate nurse reactions to workplace violence in healthcare settings and explore the implications of these reactions on reporting behavior and safety measures.
Background: Workplace violence directed at nurses, particularly ‘client-on-worker violence’ (known as Type 2), is a significant concern in healthcare settings, with potentially detrimental effects on nurses’ well-being and patient care. One contributing factor is that nursing victims often do not report acts of patient aggression to their healthcare organization or law enforcement. This underreporting phenomenon hampers efforts to accurately understand the frequency and nature of workplace violence, leading to challenges in implementing effective mitigation measures and safeguarding healthcare personnel. Understanding nurse reactions and reporting behavior in response to Type 2 workplace violence incidents is crucial for developing comprehensive strategies to enhance workplace safety. Nurses’ emotional and behavioral responses to aggressive events can profoundly impact their well-being, job satisfaction, and long-term mental health. Furthermore, the failure to report these incidents can perpetuate a cycle of violence, hindering the identification of underlying causes and potential solutions.
Methods: For the first sequence of this mixed methods study, two expert nurse research panels (n = 10) followed a rigorous process with member checks, cross-checking, and peer debriefing to create five realistic video vignette scripts portraying Type 2 workplace violence scenarios. Video production tactics further promoted realism through strategic actor casting, sets, props, camera perspectives, and post-production editing. The vignettes depicted a fictional nurse-patient interaction, each offering an alternate ending to demonstrate various acts of patient aggression that escalated in severity from video to video, ranging from mild vulgar language to a physical assault on the nurse.
During the second sequence of the research, nurses (n = 282) participated in a repeated measures survey, watching each vignette and answering the repeated questions for each video, resulting in 1382 unique responses. The survey assessed their emotional reactions to the vignettes and their likelihood of reporting such incidents. Quantitative analyses included descriptive statistics and repeated measures ANOVA/regression models.
Outcomes Achieved: The video vignettes effectively depicted workplace violence events. Nurse participants indicated 80.6% - 92.1% of the time that given representations were realistic. Further, the vignettes elicited negative emotional responses that significantly increased when a given vignette portrayed an escalating level of aggression, with nurses reporting feelings of depression, anger, fear, and anxiety. Significant factors influencing nurse reporting of workplace violence included the level of aggression displayed by the patient, the level of harm to the nurse, perceived intentionality of the patient’s actions, and frequency of exposure to workplace violence.
Conclusions/Implications: Nurse victims of workplace violence experience adverse emotional reactions that can lead to long-term mental health consequences. The study highlights the importance of promoting reporting and addressing the emotional toll of workplace violence on nurses. Healthcare institutions can develop comprehensive strategies to protect nurses and prioritize workplace safety by understanding nurse reactions and reporting behavior. Further research exploring additional factors influencing nurse reporting behaviors may also help improve reporting rates and mitigate workplace violence.

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Acceptability and Feasibility of a Dementia Care Coaching Program

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Purpose: To determine the acceptability and feasibility of disseminating the Dementia Care Practice Recommendations (DCPR) using a novel coaching program in care communities.
Background: In 2018, the Alzheimer's Association published the DCPR to provide guidance on care delivery for professionals supporting people living with dementia. To date, no published evaluation has explored a coaching model to implement evidence-based best practices for the DCPR.
Methods: A single-group pre-post design was employed to evaluate a 6-month DCPR program. Care communities in Washington (WA) and Montana (MT) were eligible. Each care community invited 3-5 staff members, including at least one administrator, nurse, and provider to work with a coach. Teams worked to assess their level of adoption of DCPR, prioritized areas of need/focus and met with the coach one hour/month for six months. Through action planning and implementation, care communities were guided to make organizational changes to increase person-centered care practices as outlined in the DCPR. Participant focus groups were held to explore acceptability and feasibility of the DCPR program. The interview guide was informed by the Consolidated Framework for Implementation Research (CFIR). Employee satisfaction was measured using the Nursing Home Employee Satisfaction Survey with a 1 (low) to 5 (high) scale pre and post-program.
Findings: Of the 200 communities in WA that were approached, 25 participated, and 4 completed the program. Of the 69 communities in MT that were approached, 12 participated, and 9 completed the program. Care communities had, on average, 50.2 (13.2) and 45.3 (21.3) residents with dementia for WA and MT, respectively. Thirty-six participants in WA and 43 in MT completed the baseline survey. Mean (SD) age of staff was 46.1 (13.9) years for WA and 47.4 (12.3) for MT. Participants had, on average, 15.3 (12.5) years for WA and 13.4 (10.2) years for MT of work experience. Seventy-nine participants completed the baseline survey; 23 (29%) completed both the baseline and post-program survey. At baseline, employee satisfaction score was 4.29 (SD = 0.08). Satisfaction of management and leadership was high (mean = 4.59, SD = 0.09), followed by satisfaction for scheduling and staffing (mean = 4.40, SD = 0.11). Employee satisfaction scores in all domains were improved after the program, but only changes in overall job satisfaction, team building and communication satisfaction scores were statistically significant. During interviews we learned the coaching model was affirming of the work that staff do, while identifying opportunities for growth. Communities completing the 6-month coaching program expressed a desire to continue. Teams benefitted from having members from cross-functional areas. The DCPR Self-Assessment provided structure to coaching meetings and setting action steps. COVID-19 provided staffing challenges, financial concerns, and lower tolerance for change due to regulation adjustments.
Conclusions: Our results provide practical and clinically relevant recommendations on implementing a coaching model to increase evidence-based practices for care community residents living with dementia. This evaluation serves as a foundation for future studies to develop evidence to inform policy that would require care communities to use a strength-based coaching program with cross-functional teams.

Temporal Relationships in Dementia Family Dyadic Communication: Sequential Analysis

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Background: Examining the temporal relationships of communication patterns between family caregivers and persons living with dementia (care recipients) is useful for determining which caregiver communication patterns are more effective in engaging care recipients and for prioritizing the use of such communication patterns.

Aims: This study examines the temporal relationships between antecedent family caregiver facilitative communication and subsequent care recipient communication during 75 in-home care video observations.

Conceptual Framework: We adapted the Person-Centered Communication Enhancement Model (PC-CEM) to develop the Dyadic Communication Observational coding scheme in Dementia Care (DCODE) to assess dyadic communication between caregivers and care recipients.

Methods: We conducted a secondary analysis using timed-window analysis of 5, 10, 15, 20, 25, and 30 seconds to examine the likelihood of relationships between dyadic communication patterns. We utilized 95% confidence intervals, p-values, and Yule's Q statistics.

Findings: The results demonstrated that care recipient engaging, challenging, and neutral communication occurred at varying frequencies within each time window following different facilitative communication by family caregivers (range: OR = 1.01 – 1.76, p < .001 - .042, Yule's Q = |0.069 - 0.274|). Care recipient engaging nonverbal communication was more likely to occur within all time windows after caregiver facilitative verbal and nonverbal communication preceded (range: OR = 1.41 – 1.76, p < .001, Yule's Q = 0.170 – 0.274). Care recipient engaging verbal communication was more likely to occur within the 25- and 30-second windows after caregiver facilitative verbal communication (range: OR = 1.15 – 1.18, p = .027 – .039, Yule's Q = 0.069 – 0.082). Conversely, care recipient challenging verbal communication was less likely to occur within all time windows after caregiver facilitative verbal communication (range: OR = 0.73 – 0.83, p < .001 - .027, Yule's Q = -0.095 – -0.155). Care recipient neutral communication less likely occurred within all time widows after caregiver facilitative verbal communication preceded (range: OR = 0.70 – 0.80, p <.001 - = .036, Yule's Q = -0.114 – -0.178). Care recipient neutral communication less likely occurred within all time widows except 25-second window after caregiver facilitative nonverbal communication preceded (range: OR = 0.68 – 0.85, p =.002 - .036, Yule's Q = -0.079 – -0.188).

Conclusions and Implications: Caregiver facilitative communication was associated with more likely subsequent care recipient engaging communication and less likely challenging and neutral communication. Future research can further explore how participant characteristics and types and frequencies of caregiver communication influence care recipient communication. These findings will guide healthcare providers in educating family caregivers on engaging individuals living with dementia in their daily care through communication strategies.

Tailoring a Diabetes Tech Intervention for Care Partners of Older Adults with Dementia

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Purposes/Aims: To explore perceived feasibility and interests in tailoring the SHARE *plus* intervention for persons with both dementia/cognitive impairments and Type 2 diabetes and their care partner (CP).

Rationale/Conceptual Basis/Background: Older individuals with Type 2 diabetes are twice as likely to develop dementia compared to those without Type 2 diabetes. When cognitive impairment co-presents in person(s) with diabetes (PWD), diabetes management becomes more challenging for both PWD and their CPs. CPs often become integral in diabetes management, yet, CPs may have unique challenges with changing roles, communication with the PWD, and lack of knowledge of dementia and diabetes management. To address these challenges and support CPs of PWD and dementia, an adaption of an existing diabetes self-management education and support intervention, called the SHARE *plus,* is proposed. SHARE *plus* is an existing, multi-component intervention that promotes continuous glucose monitoring (CGM) data sharing between PWD and CPs and provides dyadic strategies for communication, problem-solving, and action planning.

Methods: Two focus groups (n=5, n=4) with CPs of PWD and dementia were conducted. Topics discussed included dyadic communication challenges, experience with telehealth and CGM, and a presentation about the SHARE *plus* intervention. The focus groups were recorded, transcribed, coded, and a content analysis was performed by the research team. CPs completed the following questionnaires: World Health Organization (WHO) Well-Being Index, Partner Diabetes Distress Scale, Zarit Burden Interview, Illness-Appraisal, and Diabetes Partner Burden Assessment. Responses were aggregated and analyzed with descriptive statistics.

Assessment of Findings/Outcomes Achieved: Self-reported data revealed that CPs rated their quality of life as average; had low overall diabetes distress but moderate or greater stress for the dimensions of management and role distress; minimal or absent CP burden, and the majority reported diabetes was a shared issue for the CP and the PWD to manage. Key themes from the focus groups included: 1) dementia/cognitive impairment disease education and management represents a priority, not diabetes management; 2) CPs use unique communication strategies to support PWD (e.g., keeping it simple, avoiding topics around diabetes management, supporting the PWD in self-management, and being present at appointments to give accurate information); 3) recommendations for SHARE *plus* adaptation (e.g., varying intervention approaches based on level of cognitive impairment); and 4) perceived benefit of CGM with data sharing and telehealth for intervention delivery, although CPs need to facilitate these technologies.

Conclusions/Implications: Despite low CP burden, CPs were interested in and identified the perceived benefit of tailoring the SHARE *plus* intervention for PWD and dementia. If successful, the adapted intervention can address an unmet need in diabetes and dementia management and has the potential to improve quality of life for CPs. Next steps include adapting and testing the tailored SHARE *plus* intervention for CP-PWD and dementia dyads.

Funding: University of Utah Family Caregiving Collaborative Grant

Relationship of Dosage-Outcomes in Tailoring Caregiving Interventions

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Purpose: To examine through secondary analyses the nature of caregiving issues and the dosage-outcome relationship resulting from families who participated in the Oregon Health & Science University/Kaiser Permanente Northwest Region Family Care Study. Families identified the care issues they wanted to work on and determined frequency of contact.

Background: Tailoring has become the norm in caregiving interventions for frail older adults and family caregivers over a one-size-fits-all practice. Although tailoring can include variations in dosage, most caregiving interventions aim for a specific number of visits, calls, and duration. In the Family Care Study, intervention families were introduced to the PREP intervention. PREP's goals were to improve preparedness, skill, enrichment, and predictability in family care through a model of in-home visits and telephone care delivered by nurses and other health providers to help manage complex care needs. Tailoring began with assessment by a PREP nurse, and families selecting care-related issues to work on. The family needs and preferences guided the number and timing of nurse visits and calls. There was no pre-determined limit of visits or calls within the year-long intervention

Methods: The secondary analysis sample included 116 care recipient-caregiver dyads randomized to the PREP intervention from 234 care recipient-caregiver dyads in the Family Care Study. Care issues were analyzed through text and quantitative data recorded in a PREP *e*-chart where PREP nurses and aides recorded the care issues and record of PREP contacts. PREP dosage included intervention-related visits and phone calls. Skilled home health visits were also recorded. Three dosage variables were analyzed (a) PREP and home health visits; (b) PREP phone calls; and (c) total of PREP contacts and total PREP plus skilled home health contacts. Outcomes of improved family care and usefulness of home health assistance was measured using the 44-item Home Care Effectiveness Scale (HCES). Content analysis was used to code family-identified care issues. Statistical analysis was used to describe levels and variability of issues, visits, calls, and outcomes.

Assessment of Findings: Of the 116 PREP families 84% chose at least one issue to work on, 35 chose two to three issues, and 45 chose four to 10 issues. PREP families received between one and 101 PREP-focused contacts (median = 16.5 contacts). Families choosing more issues received more PREP nurse, aide visits and phone calls. Number of issues were not related to the skilled home health visits. Families receiving more PREP nurse visits reported higher levels of improved family care ($B = 0.26$, $p = 0.007$) and usefulness of home health assistance ($B =0.41$, $p = 0.001$). PREP aide visits and phone calls were not correlated with improved family care.

Conclusions: The findings support that more PREP nurse intervention visits were associated with better outcomes, and that the number of PREP nurse visits could be representative of the intensity of engagement of families in the PREP process. Tailoring interventions is considered important, however there is need for continued research and analysis to identify characteristics of families for whom more visits would lead to better outcomes.

Perceived Balance, Balance Performance, and Falls Among Older Adults

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Purpose: The aim of this study was to examine the extent to which older adults' perceptions about their own balance ability, and the commonly used fall risk assessment methods of a balance performance test and self-rated fear of falling (FOF) were associated with falls in the last month in a nationally representative sample of community-dwelling older adults.

Background: Accidental falls are a significant health threat among older adults (over age 65) and falls are the leading cause of injury and injury death among this population. Primary methods to determine older adults' fall risk include balance performance assessments, such as the Short Physical Performance Battery (SPPB), and self-rated FOF that increases fall risk due to activity avoidance and postural changes. Self-report is the primary method of identifying falls among community-dwelling older adults, yet up to 72% of Medicare beneficiaries do not report falls or falls-related injuries to their healthcare providers. Among older adults, the topic of falls is associated with embarrassment, frailty, and loss of dignity creating a reluctancy among older adults to discuss falls with their healthcare providers. A new method to determine fall risk among older adults is needed. Findings from a recent phenomenological study showed that the older adults did not use the term 'fall risk' to describe their own perceived risk for falling. Instead, they preferred the term 'having a balance problem,' suggesting that balance problems may be a more acceptable term among older adults. Moreover, limited evidence suggests that older adults' perceived balance confidence is a better predictor of falls than balance performance tests. Thus, exploring perceived balance problems and balance performance in relation to self-reported falls in a large sample of older adults is warranted.

Methods: The Health Belief Model and the concept of perceived susceptibility served as the study's theoretical framework. A retrospective, cross-sectional, secondary analysis using data from the National Health and Aging Trends Study from year 2015 was conducted. The outcome variable was self-reported falls in the last month.

Results: A subsample of independently living participants (N = 7499) was selected, and 10.3% of the sample reported a fall. Multiple logistic regression analysis revealed that the odds of reporting a fall in the past month was 3.3 times ($p < .001$) greater for participants who self-reported having a balance problem compared to those who did not. Reporting pain, poor self-rated health status, and symptoms of depression and anxiety were also associated with falling, with non-Hispanic Whites more likely to report a fall than non-Hispanic Blacks. In contrast, the SBBP, self-reported FOF, and perceived memory problems were not uniquely associated with falls.

Conclusion and Implications: Older adults' perceived balance problems were strongly associated with their self-reported falls in the last month, in contrast to the SPPB and FOF. Assessing older adults' perceived balance may be a new way to identify fall risk and improve older adults' willingness to report balance problems and accidental falls. Older adults' perceived balance should be included in nursing fall risk assessments and fall prevention interventions.

Associations of Caregiver Health and Loneliness Among Older Adults in California

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Purpose: To understand how caregiver health factors (caregiver health status, caregiver mental or physical health problem due to caregiving, and care recipient's health condition) and sociodemographic factors ((race/ethnicity, education, % of the federal poverty level, and gender) in older adults (65+) are associated with loneliness.

Background: In California, the number of older adults ages 60 and older is projected to increase from 16% of the population in 2010 to over 25% of the population in 2030. Over 77% of older adults prefer to "age in place" and stay in their home/community setting as long as possible. An important support for older adults aging in place, is help from informal caregivers who provide assistance with multiple activities and tasks. According to the caregiver stress model, informal caregiving can involve many stressors that impact caregiver physical and mental health. A large body of evidence demonstrates associations between caregiving and poor physical and mental health outcomes. Taken together, the stressors and poor health outcomes can lead to feelings of loneliness, which includes feelings of isolation, disconnection, and not belonging.

While some aspects of caregiving have been explored in relation to caregiver loneliness, specific factors including medical condition(s) of the care recipient, and mental and physical health concerns arising from caregiving - have not been studied in detail. Moreover, these factors have not been considered in the context of the social determinants of health.

Method: Analysis of a cross-sectional survey, California Health Survey Interview, with data collected from 2020. Of the 21,949 adults that completed the 2020 survey, this study sample includes 1,770 caregivers who completed the UCLA 3-item Loneliness Scale. Multivariable logistic and linear regression models were used to determine associations of caregiver health factors to loneliness.

Assessment of Findings: Caregiver health factors (caregiver health status, caregiver mental or physical health problem due to caregiving) and higher financial stress are associated with loneliness. For caregiver health factors, the odds of loneliness are 50% higher for those with good health status, and 199% higher for those with fair/poor health status, compared to those with excellent/very good status; Caregivers that have a mental or physical problem due to caregiving have odds of loneliness 199% higher than caregivers who do not. The odds of loneliness are 61% higher for those with a little financial stress due to caregiving and 120% higher for those who had somewhat/extreme financial stress compared to those who had no financial stress. The odds of loneliness are 35% lower for females and 33% lower for those that are caregivers now p=.002. These associations are statistically significant for the fully adjusted model.

Conclusions: Loneliness is a growing concern of older adults in times of COVID-19 and requires focused efforts to prevent and/or assist those with loneliness, especially for men.

Clinicians' Experiences of Familiarity Providing Palliative and End-of-Life Care

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Purpose/Aim: This study's purpose was to explore South Dakota rural and urban clinicians' familiarity with patients and families whom they know well and clinicians' perspectives on how familiarity impacts their comfort initiating palliative and end-of-life conversations.

Background: The concept of familiarity encompasses a wide range of relationships, from friendly to intimate. The level of familiarity experienced by rural healthcare clinicians of all disciplines often extends far beyond simply being able to identify an individual, especially considering the complexities associated with living among persons for whom they also provide health care. Nurses living in rural communities and working in their communities' rural health care facilities frequently report being very familiar with their patients and families. A lack of anonymity and subsequent familiarity may pose innate challenges for rural healthcare clinicians as they navigate professional and personal relationships within the rural setting. To date, no inquiry existed exploring rural clinicians' familiarity and comfort initiating palliative and end-of-life discussions with patients and families with serious illness.

Methods: We used a descriptive qualitative design to conduct semi-structured interviews over Zoom with rural and urban clinicians practicing in South Dakota.

Assessment of Findings: N = 10 rural and urban clinicians participated, with n = 3 APRNs, n = 2 MDs, n = 1 LPN, n = 4 RNS. Four of the participants worked in the urban setting and six were rural. Each participant shared their experiences providing care to patients and families with whom they knew well. They eloquently described how familiarity impacted their ability to discuss palliative and end-of-life options and care during serious illness. By interview eight, we had reached thematic saturation, and elected to continue to achieve as close to equal number of participants from rural and urban settings. Our thematic analysis identified the overarching theme of navigating familiarity. Intimately intertwined with navigating familiarity were the following themes: (a) the "hard made easy;" (b) bringing the pages together; (c) tugging the heart strings; and (d) overfamiliarity.

Conclusion/Implications: Our rural and urban participants identified that caring for patients they know on both personal and professional levels did not create barriers to initiating palliative and end-of-life conversations. Instead, many described how familiarity made those hard conversations "easy" because of these personal connections. Our study demonstrated that clinician familiarity with patients and families can provide a foundation for navigating palliative and end-of-life conversations effectively, where reports of lack of familiarity makes navigating those conversations more challenging. However, it is critical that clinicians are attentive that familiarity has the potential to lead to role ambiguity and overfamiliarity, which can blur personal and professional boundaries.

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Acute Care Nurses’ Lived Experience of Existential Advocacy

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Background: Through existential advocacy (EA), nurses support and promote a patient’s right to self-determination by helping them discern their holistic health and wellness situation and then clarify their values within that reality. Research on nurse advocacy as a general topic is prolific. However, it is unclear how the value of EA is contextualized in modern nursing or how it is distinguished from other forms of nurse advocacy. Furthermore, there is a paucity of research on how acute care nurse-patient relationships and communication influence patients’ self-determination and nurture meaningful patient experiences for the nurse and patient.

Purpose: This pilot study aimed to examine how the lived experience of providing EA creates meaning for acute care bedside nurses (ACN) caring for patients with serious life-limiting illnesses and the significance nurses find in the conscious or unconscious nurse-patient connections that facilitate open, engaged, and trusting communication.

Approach: Hermeneutic phenomenology informed the use of individual semi-structured qualitative interviews. Four nurses were recruited via purposive and snowball sampling. Inclusion criteria comprised nurses with a history of acute care bedside nursing who self-reported having one or more patient encounters where they felt a unique connection facilitated greater understanding of the patient’s health and wellness values. This study took place between June 2023 and October 2023. Interviews were 45 to 75 minutes long, conducted, recorded, and transcribed using Zoom. Reflexive journaling, field notes, peer debriefing, mentor debriefing, and record-keeping were incorporated to ensure credibility, dependability, confirmability, and transferability. Van Manen’s interpretation of thematic analysis guided a reflexive, inductive, and iterative data analysis method while Atlas.ti provided organization tools for thematic analysis, memoing, and visualization of thematic formations. Thematic formations from pertinent participant quotations guided the composition of linguistic transformations.

Outcomes: Three primary themes were identified: a) everything takes place in the context of the patient’s story, b) time spent communicating *with* a patient builds mutual and reciprocal sincerity, and c) collaboratively orienting toward hope. While hermeneutic phenomenology posits that there is no final truth, the essence of providing EA for ACNs’ in this study is *becoming a hopeful part of the patient’s story*.

Conclusion: ACN-patient relationships centered around the nurse *becoming a hopeful part of the patient’s story* align with patient-centered humanizing care, prioritizing patients’ values in healthcare decision-making. The time ACNs’ spend with their patients allows them to learn the feelings and meanings within their stories. This depth of understanding and trust allows a collaborative orientation toward hope regardless of a cure for a patient’s severe life-limiting illness. This study examined ACNs’ pre-reflective understandings of positive patient connections without interjecting what should be done, how something is done right or wrong, or placing judgment. By focusing on ACNs’ positive connections, communication, and care, researchers can learn from their perspectives, which inherently gives value to the essential care ACNs’ provide while adding to our depth of knowledge surrounding bedside nurse communication.

Development of Culture-Centric Palliative Care Messages with American Indians

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Purpose/Aims: The purpose of our presentation by our interprofessional team (American Indian and non-American Indian researchers, health communication experts, and public health professionals) is to share results from Talking Circles used to guide the design of culture-centric messages to promote palliative care within three Great Plains Tribal communities.

Rationale/Background: Culturally responsive palliative care can ease serious illness burden experienced by American Indians and improve end-of-life decision-making. However, access to and use of culturally responsive palliative care is severely limited for seriously ill Great Plains American Indians living in reservation communities with some of the highest mortality disparities in the US. Over the past 18 months, the Great Plains Palliative Care Consortium has been trialing a culturally responsive community health worker primary palliative care program. Concerns of American Indian receptivity for palliative care exist and are related to mistrust and misperceptions among American Indians and healthcare workers. Moreover, knowledge of American Indian palliative care beliefs, perceptions, and awareness is low, with minimal research regarding effective messaging strategies to increase palliative care awareness and understanding.

Approach/Methods: Our team recognized that to increase knowledge about, awareness of, and intentions to discuss palliative care among American Indians, and to advance palliative care in American Indian communities, it is critical to develop culture-centric messages. We used the Narrative as Culture-Centric Health Promotion model as a foundation and employed principles of community-based participatory research and Indigenous methodologies to conduct Talking Circles in three Great Plains Tribal communities. We then applied the Indigenous practice of storytelling and the Talking Circle conversation guide co-developed with our three Community Advisory Boards, as we listened to and explored the experiences of American Indians affected by serious illness.

Assessment of Findings: Our participants (N = 28) ranged in age from 22-81 years, with 21 identifying as female and 7 as male. Thematic analysis incorporated the Narrative as Culture-Centric Health Promotion model in the analysis of the data. This model identified that culture-centric messages needed to include engaging characters, an engaging story, and cultural embeddedness. We learned our engaging characters should comprise a range of ages—early, middle, and elder adults, males and females, and voices from the three Tribal communities. Our message's engaging story must consist of these elements: the isolation of serious illness, the importance of privacy, the role of family, and the art of "showing up." Palliative care must be defined and linked to assistance from patient/family advocates who can provide education and connect them to clinical/community resources. Cultural embeddedness should include instantly recognizable images: sage, star quilts, sacred sites, prayer flags, tobacco ties, and Tribal flags.

Conclusion: It is critical that palliative care professionals, healthcare systems, and policymakers partnering with American Indian communities recognize, acknowledge, and consider options for palliative care programs. These programs must be grounded in palliative care principles and embed the culture's values and ways of understanding serious illness care. This recognition can serve to break down barriers in palliative care acceptance and provide opportunities for improving quality of life for these populations.

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Rural Veterans Experiences Accessing Chronic Pain Care in VA Community Care

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Purposes/Aims: To explore experiences of rural Veterans receiving chronic pain treatment in the Veterans Health Administration (VA) Community Care Network (CCN), including their perceptions about barriers and facilitators to accessing comprehensive chronic pain management.
Rationale/Background: Chronic pain is common, costly, and disproportionately impacts Veterans. Rural Veterans are impacted by multiple barriers to care, including long distances to the nearest VA medical center, which may contribute to delays in services and care fragmentation. In 2019, the VA established the CCN to provide Veterans access to care in non-VA community-based settings, including chronic pain management. While Veterans' utilization of CCN services has increased steadily, little is known about quality, safety, and experience of Veterans.
Methods: Ten rural Colorado Veterans receiving chronic pain management in the VA CCN participated in a semi-structured, qualitative interview about their experiences accessing and utilizing the VA CCN. Interviews were conducted by videoconference, recordings were transcribed verbatim, and thematic content analysis was used to identify themes and patterns.
Results: Veterans described having limited knowledge about the VA CCN, including what pain treatment services were available, how to navigate the approval process, how to find participating providers, and understanding the referral and authorization procedures. This lack of knowledge resulted in delays or difficulties in accessing the care they need. Participants reported that the communication between the VA and community providers sometimes presented challenges, which made the coordination of referrals and authorizations for community care services complex and time-consuming. Conversely, once enrolled in the CCN, Veterans valued the freedom to choose healthcare providers who specialize in pain management within their local communities, voicing a preference for the "civilian side", which supported prompt access to appointments and a more holistic approach to delivery of care. Veterans felt empowered to explore a wider range of pain treatment options and alternative therapies, including acupuncture, dry needling, chiropractic care, and physical therapy, in addition to traditional medical interventions. This increased autonomy enabled Veterans to choose treatments that align with their personal preferences, needs, and values. Additionally, by reducing the need for long-distance travel to VA medical centers, Veterans were able to access services more conveniently and could receive prompt treatment, contributing to better overall healthcare experiences.
Implications for Further Research/Policy: The VA CCN has improved access to specialty pain management, allowing rural Veterans to receive care within their local communities. However, efforts to enhance awareness of and access to the CCN are needed to enable Veterans to make independent healthcare decisions that meet their needs locally. This, in part, should involve prioritizing efforts to streamline the referral and authorization process. While the CCN seeks to improve collaboration between VA and community providers, recognition of Veterans' experiences should underpin the development of network improvements. More universal implementation of CCN processes is needed to enhance access to care, including chronic pain management, in the rural Veteran population.

Funding: VA HSR&D Pain Opioid CORE Grant, rapid start funding

Impact of Menthol in Tobacco, E-Cigarettes, & Nicotine Products: A Systematic Review

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Purpose: The purpose of this systematic review was to describe the rates of use of tobacco, e-cigarettes, and other nicotine products containing menthol and the impact of menthol use on users.

Background: Menthol reduces the unpleasant attributes of tobacco products, increasing desirability for users.

Currently, flavors in cigarettes are banned, excluding menthol. New standards are proposed prohibiting menthol cigarettes and cigars. If successful, legal challenges causing extensive implementation delays are likely.

In 2019/2020, 37.0% of all cigarette sales were menthol flavored. In 2022, 31.9% of all e-cigarettes sales were menthol flavored. Recently, sales of menthol e-cigarettes increased dramatically. Menthol is used in other tobacco and nicotine products. The nursing profession can contribute to decreasing the impact of menthol through policy, clinical and educational practice.

Methods: PubMed, EBSCO, and Scopus were searched for evidence of the impact of menthol on senses, tobacco use initiation, users' health, and cessation. Combinations of key words were used. Peer-reviewed articles published between 2017-2022 in English were included. Articles with studies conducted outside of the U.S. were excluded. Additionally, findings were included from grey literature searches. A PRISMA Flow Diagram will be presented.

Assessment of Findings: In 2021, of the 79.1% of middle and high school students reporting currently using flavored tobacco products, menthol use was 38.8% for cigarettes and 28.8% for e-cigarettes. In 2019, an estimated 5.7 million young adults currently smoked tobacco products, 51.0% smoked menthol cigarettes. For older adults, an estimated 39.4 million currently smoked tobacco products, 39.0% smoked menthol cigarettes.

Menthol's sensory effects are associated with a positive smoking experience contributing to cigarette smoking. Inhalation of menthol produces a cooling sensation, decreasing the cough reflex and reducing airway pain and irritation.

Menthol may increase initiation of tobacco product use. Studies suggest a relationship between menthol tobacco and progression from experimental to more established tobacco product use among certain populations

From 1980 to 2018, it is estimated that menthol cigarettes were responsible for 10.1 million additional smokers and 378,000 premature deaths. Studies showed that menthol cigarette use yields the same likelihood of developing several types of cancer and other diseases.

The evidence from strong studies published between1980-2021 indicated that the menthol in cigarettes is *likely* associated with decreased success for smoking cessation.

Conclusions/Implications: Menthol tobacco products are widely used, may increase tobacco product initiation, may make cessation more difficult, and contribute greatly to premature deaths.

Nurses should advocate for known effective public policies to decrease menthol in tobacco and nicotine products by increasing prices and taxes on these products, supporting FDA's efforts and any state or local efforts prohibiting menthol in these products, and prohibiting marketing of menthol products to youth.

Clinically, nurses should advocate for healthcare systems to assess all tobacco products and to ensure access to evidence-based cessation resources.

Nursing should educate others, within and outside of the discipline, including parents and students about menthol's impacts. Nursing education curriculums should provide information on all tobacco and nicotine products, menthol's impacts, assessing tobacco/nicotine product use, and ensuring access to evidence-based cessation resources.

Funding: This study was funded by the North Dakota Department of Health and Human Services, Tobacco Prevention and Control Program (G21.781 & G23.186).

POPULATION HEALTH

The Volunteer Care Clinic Diabetes and Hypertension Screening Program

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Background: Low-income uninsured residents in Utah County have limited access to screening and preventative care services for diabetes and hypertension. Access to screening programs and preventative care are necessary for the early identification and treatment of chronic conditions in this vulnerable population.

Purpose: This quality improvement project aimed to create a hypertension and diabetes screening program to serve low-income, uninsured Utah county residents.

Methodology: The Volunteer Care Clinic is a medical clinic sponsored by various community partners to provide free medical care to low-income and uninsured residents of Utah County. Grant funding was obtained through the local health department to improve diabetes and hypertension diagnosis and management. Student nurses, physicians, and translators volunteered from the community to staff the program. Health screenings for hypertension and diabetes were implemented in the Provo Volunteer Care Clinic twice monthly from February to April 2023. These health screenings were staffed by student nurse volunteers from a local university with Spanish proficiency. Patients identified with elevated blood pressure and/or hemoglobin A1c levels were provided educational resources, seen by a medical provider, and referred to subsidized clinics for long-term management of their disease.

Results: One hundred four patients participated in the screening events during the screening timeline. Forty-three participants were identified as having hypertension, diabetes, prediabetes, or a combination of hypertension and diabetes. Post-screening participation (n=11) was limited, but fifty-five percent of those who participated in post-screening evaluation were compliant with their prescribed plans of care. Twenty-seven percent of the post-screening participants scheduled an appointment for long-term management of their diagnosed condition after their screening. The program was determined to be successful in identifying high-risk individuals in the community. The program will continue with support and funding from the local health department, local university nursing programs, and community volunteers.

Implications for Practice: This project provides a blueprint for other communities who wish to develop screening programs for at-risk populations. Program such as these will lead to increased identification and early treatment of diabetes and hypertension. Screening events at the VCC were effective at identifying at-risk low-income uninsured residents for hypertension and diabetes. Increased post-screening data is needed to evaluate the effectiveness of educational resources regarding diabetes and hypertension. Also, compliance with follow-up screening and referral was limited. Additional resources will be invested in this program to improve strategies for follow-up and referral.

Funding: Utah County Health Department 2022-358

POPULATION HEALTH

To Build a Foot Clinic for a Houseless Population: Design, Implementation and Education

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Purpose: This project, a collaboration between a University, social service organization, and community partners aimed to 1) design and implement a foot clinic for the houseless population, 2) provide monthly, trauma-informed foot care, and 3) improve the knowledge and confidence of foot care providers.

Background: Those experiencing houselessness are highly susceptible to foot issues, walking ten to fifteen miles a day. Consequently, the houseless population are more likely to suffer from foot problems including corns and calluses, nail pathologies, and biomechanical issues. Untreated foot conditions can lead to decreased quality of life, hospitalization, or death. Compounding the problem, many patients experience barriers in accessing care or are reluctant to seek healthcare for fear of being judged by healthcare providers. When patients do seek care, providers are not always equipped to care for their unique needs, nor do they have the necessary foot care knowledge.

Research supports that education on the unique aspects of houselessness, such as high rates of trauma, can improve providers' knowledge and confidence caring for this population. Focused and up-to-date foot care education is needed to improve providers' knowledge, so they can support the foot health of the population they are serving.

Methods:

Design and Implementation

Inspired by the work of Josephine Ensign and using the Donabedian Framework, a team of nursing faculty and alumni, designed and implemented a monthly foot clinic in the parking lot of a non-profit social service organization. The foot clinic, staffed by volunteer nurses and students and funded by grants and community partners, provides basic foot care to the houseless community in Portland, Oregon. With a focus on hospitality and inclusion of music therapy, an emphasis is placed on creating a trauma informed environment.

Provider Education

Developed by a DNP student, online educational modules were created to increase knowledge and confidence of providers. Modules featured content on footcare for the houseless population, routine footcare, common foot conditions associated with the houseless population, evidence-based interventions for corns and calluses, common footcare tools, and trauma informed care considerations. Effectiveness was measured with surveys prior to and following both education and clinic implementation to evaluate impact on providers' knowledge and confidence in providing foot care to the houseless population.

Results: Since implementation, 20 foot clinics have been offered with care to over 250 houseless individuals. Provider participation included nursing faculty (n=6), graduate students (n=5), undergraduate students (n=20) and volunteer nurses (n=8). The survey results demonstrated improvements in knowledge and confidence of providers at all levels, across all time points.

Implications for Nursing: Nurse-led initiatives have the capacity to address the needs of complex populations, offer teaching and learning opportunities for students and enhance the promotion of the nursing profession.

Nurse Awareness of an Environmental Stewardship Framework for Climate Health

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Background: The World Health Organization has recently stated that climate change is the single biggest threat to the health of humanity. Climate change is largely driven by human activity generating pollutants that negatively impact the environment. The healthcare sector's operations alone account for nearly 8.5% of annual United States (U.S.) greenhouse emissions. Nurses are well-positioned within the healthcare space to take actions to reduce healthcare emissions and promote environmental health. For instance, a nurse-authored framework helps contextualize causes of healthcare pollutants as: Waste, Energy/water, Agriculture/food, Chemicals, and Transportation (WE ACT). A large, 52-hospital health system in the United States adopted this framework in 2020 to help achieve a critical objective: to work toward becoming carbon negative by 2030. The health system is at the onset of spreading awareness and adoption of the framework to nurses, and to date, nursing awareness of the WE ACT framework across the health system had not been assessed.

Purpose: To complete a baseline assessment describing the proportion of nurses reporting awareness of the WE ACT framework and test for differences among those aware versus those unaware.

Methods: A secondary analysis was conducted of a cross-sectional, electronic survey-based study. Licensed and registered healthcare staff working across the large healthcare system were eligible to participate and were recruited via printed and electronic flyers in staff-specific physical and virtual spaces. Data considered in this secondary analysis included participants indicating work as a registered nurse, demographics (sex, years of experience, direct care versus non-direct care role) and answers to questions regarding awareness of: the WE ACT framework and the system's initiative to be carbon negative. Data were analyzed descriptively and compared using chi-square tests for categorical variables or unpaired t-tests for continuous variables. All tests were two-tailed and a p-value of <0.05 was considered significant.

Results: A total of 643 nurses responded, and of these, 250 (38.9%) reported an awareness of the WE ACT framework. Nurses reporting an awareness of WE ACT were significantly more likely to report an awareness of the system's carbon negative initiative ($p<0.001$), to work in a non-direct care role ($p<0.01$) and had significantly more years of experience on average ($m=20.6$ years versus $m=16.6$ years, $p<0.001$).

Conclusions: A minority of nurses working in a large health system with an adopted framework to optimize environmental stewardship reported an awareness of the framework. Proportionally more nurses working away from the frontlines of patient care reported an awareness of WE ACT, highlighting opportunity to better socialize the framework and principles of environmental stewardship with these groups.

Implications for Practice: Nurses represent a large portion of the healthcare workforce and stand able to make significant impacts on climate and health. Nurses should be armed with the knowledge and resources to influence reduction of the healthcare sector's footprint on climate change. Results from this study can help nursing leaders focus efforts to raise awareness and engagement with this important topic.

Historical & Projected Effects of Cold Temperatures on Mortality in Connecticut

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Purpose: The purpose of this study was two-fold: (1) Evaluate the association of cold temperature on daily excess mortality within Connecticut over a ten-year observation period (2006–2015); (2) Project future cold-attributable mortality in Connecticut under different climate change scenarios.

Rationale: Extreme temperatures pose a significant threat to human health. Although numerous studies have highlighted the threat of heat exposure, cold temperatures are often associated with greater mortality. Despite considerable negative health effects, the interaction between cold and factors affecting adaptation, such as rurality and the cost of household heating, are not well understood. As impacts of climate change differ significantly across different geographical regions, understanding the historical and projected health effects of cold temperatures within specific local contexts is crucial for informing effective adaptation policies and planning.

Methods: This study used 2005–2016 mortality data from the Connecticut Department of Public Health. Daily mean temperature from the Parameter elevation Regression on Independent Slopes Model (PRISM) Climate Group was obtained by calculating state-level region-weighted average temperature. Data from the United States Energy Information Administration was used to quantify average weekly price per gallon for home heating oil. Our primary outcome was aggregated number of total daily deaths across the state. Our primary exposure was daily mean ambient temperature. We performed a time-series analysis using a generalized additive distributed lag model with a quasi-Poisson regression to evaluate the association between below-freezing temperature and all-cause mortality in Connecticut. We included main effects and tested interactions for rurality and average daily home heating oil prices. With the concentration–response function from our historical analysis, we projected future cold-attributable mortality for the years 2025–2050 under Representative Concentration Pathways (RCP) 4.5 and 8.5, using CCSM-4 estimates and Multivariate Adaptive Constructed Analogs (MACA).

Findings: We found a statistically significant positive association between below-freezing temperatures and all-cause mortality, with a relative risk of 1.12 (95% CI: 1.10, 1.14). Using historical quartiles of heating oil prices per gallon, effect modification by prices showed little effect on the relationship between cold temperatures and all-cause mortality. Estimating future projections, we found a reduction in cold-attributable mortality with temperature bias correction under RCP 4.5 (690 fewer deaths). Under RCP 8.5, we found fewer cold-attributable deaths without temperature bias correction (931 fewer deaths). These projections estimate a reduction in cold-attributable deaths in Connecticut under both scenarios.

Conclusions: Cold-attributable deaths pose a significant public health concern, particularly in the context of climate change. These findings underscore the importance of state-level interventions to mitigate health risks associated with cold and provide the local data to support development of targeted policies and planning. Additionally, our findings demonstrate the importance of Connecticut’s heating assistance program in protecting residents from severe cold conditions. This program could potentially serve as a model for ensuring affordable access to heating, addressing it as a public health concern for other states expected to experience rising cold-related mortality due to climate change. To deepen our understanding, future research should explore specific drivers and modifiers of cold-related mortality in localized contexts both within and beyond Connecticut.

Improving Medical Adherence in a Community Health Clinic

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Purpose: To determine patient adherence in follow-up medical care and the main factors affecting a lack of adherence.

Background: Those without health insurance or lower socioeconomic status have limited access to healthcare. The Emergency Medical Treatment and Labor Act requires hospitals to treat patients regardless of their ability to pay. However, this is a costly solution for hospitals as they usually have to forgive the cost of medical care due to the patient's inability to pay. In some communities, efforts to decrease utilization of the emergency department as a primary source of medical care have resulted in the creation of volunteer clinics. These clinics include various medical providers who give care to patients free of charge. However, if patients are not adhering to follow-up care, they are more likely to need emergency services. As such, identifying patient needs and ensuring follow-up is essential to ensuring patient health and lowering healthcare costs. The Volunteer Care Clinic (VCC) is a free clinic serving uninsured, low socioeconomic residents of Utah County, many of whom primarily speak Spanish. The director of the VCC expressed concern that patients assigned medical tasks after their visit were not completing these prescribed tasks.

Methods: A survey was created to determine if patients were completing medical follow-up care and discover potential barriers to adhering to follow-up care. Qualifying participants included those who had attended the VCC in April 2023 and were referred to follow-up medical care. Two BYU students with fluency in the Spanish language called these patients and conducted telephone interviews. After obtaining informed consent, patients were asked questions surrounding the completion of follow-up care and reasons for non-adherence.

Assessments of Findings: Of the 171 patients who visited the clinic in April 2023, 89 were eligible to be surveyed due to having prescribed medical follow-up. Of the patients called, 68 of the 89 (76%) agreed to participate in the survey. Of the 68 respondents, 32 (47%) reported completing their prescribed tasks. Seven respondents (10%) stated their symptoms resolved. Of the remaining 29 respondents (43%), 11 (16%) reported financial obstacles in completing follow-up care. Ten interviewees (15%) stated time as a barrier to fulfilling their medical duties. Lastly, eight participants reported challenges with scheduling availability in the referred clinic (12%).

Conclusions: Results indicated that time and money were the most significant obstacles affecting patients' ability to complete follow-up medical care. Because of the survey results, the VCC has found two long-term volunteers who will serve as patient advocates. These volunteers will connect patients with community resources and manage a small team of student volunteers from nearby universities to coordinate follow-up care with referrals. Addressing and improving non-adherence for uninsured patients reduces overall healthcare costs while promoting health and equity.

Knowledge and Perceptions of Parents/Caregivers Re: Environmental Heat and Children

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Rationale/Background: The World Health Organization predicts child mortality related to climate change will exceed 100,000 deaths per year by 2050. Predicted increases in global temperatures intensify the urgent need to address environmental heat exposures that children encounter through microclimates such as unshaded play areas, and inside vehicles. Young children are at risk due to their inability to thermoregulate quickly in extreme heat.

Purposes/Aims: The purpose of this research was to explore parental/caregiver knowledge and perceptions of risks associated with environmental heat exposure in young children to inform best approaches by clinicians, community, and public health professionals to promote child safety in relation to environmental heat. Specific aims were to: (1) explore perceptions of adult parents/caregivers about behaviors related to young children and adverse environmental heat, and (2) identify adult parents'/caregivers' knowledge about adverse environmental heat and risks to health of children aged newborn to four-years.

Methods: Qualitative inductive content analysis was used. Fourteen parents and two non-parent caregivers completed a short demographic survey and participated in a 40-60-minute semi-structured interview. Participants primarily identified as Black or African American (62.5%), female (81.3%), age 25-34 years (56.3%) and some college or B.S. degree (68.7%). Open-ended questions were asked about child safety, environmental heat exposures, and Pediatric Vehicular Heatstroke (PVH).

Assessment of Findings: Five perception categories emerged: 1) general child safety concerns, 2) physical location and scenarios for environmental heat exposure, 3) parental behaviors and observations, 4) parental experiences and anticipatory fears/feelings, and 5) thoughts about other parents/caregivers. Seven knowledge categories emerged: 1) general knowledge, 2) receiving information about PVH, 3) parents questioning and judging other parents, 4) parental accountability, 5) environmental concerns, 6) social support for parents, and 7) community partnering to increase awareness.

Participants described child safety as an interconnection between home, public, and emotional spaces but did not spontaneously include weather-related heat environments when discussing providing safe environments for young children. They shared perceptions that: parenting can be overwhelming, stressful and full of distractions that may contribute to young children being left in hot environments. Participants expressed having limited knowledge regarding heat exposure on children's health and reported that news or social media was a main source for information about PVH. Overall, participants expressed the need for increasing public awareness and education about environmental heat and young children. Participants suggested partnering with pediatricians, pediatric nurses, community leaders, and community organizations.

Conclusions: Parents/caregivers provided insights that could help develop strategies to prevent adverse environmental heat exposures in young children. Strategies to pursue include partnering with pediatric clinicians, community organizations, and public health officials to modify practice guidelines for well-baby/child check-ups to include a heat risk assessment, and information on heat microenvironments and PVH. Another strategy is to encourage political engagement to increase green spaces and shaded play areas for children. Policies could be instituted for employees at community parks and other outdoor spaces where children play to inform them about prevention of adverse heat exposures and how to communicate this information to parents/caregivers.

A Community-Based Doula Program to Address Maternal Health Disparities: Herstory, Inc

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Purpose/Aim: This proposed study was to conduct a needs assessment with the goal of developing a Black, Indigenous, People of Color (BIPOC) community-based doula program to address maternal health disparities in Orange County (OC), California.

Background: In the United States, Black women are three to four times more likely to experience a pregnancy-related death than White women (41.7/100,000 vs. 13.4/100,000). Preterm births (i.e., less than 37 weeks gestation) are almost double that of White women (14.4% vs. 9.3%). Such maternal and infant health disparities remain in OC, CA. Growing evidence shows that doula care is associated with improved maternal health outcomes such as decreased c-section and depression as well as increased breastfeeding initiation. However, there is no doula program in OC, CA. HERstory, Inc (HERstory) was founded in 2021 to close this gap by providing a safe space for BIPOC birthing families to learn, create community, and thrive.

Methods: A community-based participatory research (CBPR) is used as the overall methodology to achieve the proposed aim in three phases through collaboration between HERstory and an academic institution. <u>Phase I</u>, HERstory and the academic team to co-develop the needs assessment plan. <u>Phase II</u>: HERstory and the academic team co-implemented needs assessment by recruiting/consenting six postpartum mothers and six doulas, distributing REDcap demographic surveys, and facilitating the focus groups. The examples of focus group questions were: “What would you say is your greatest need during pregnancy and/or birthing/postpartum?”, “What ways would you recommend improving perinatal care for BIPOC women?”, “What are the benefits of having a doula?”, and “What challenges/barriers do you foresee for a doula assisting a patient within the healthcare setting”. <u>Phase III</u>: the academic team conducted the content analyses using Atlas.ti software and shared the results with HERStory.

Findings: Of six postpartum women with a mean age of 35.67 (SD=6.35), 3 (50%) were self-identified as Black/African American; 4 (67%) had Medi-Cal insurance; 4 (67%) experienced perinatal depression and 2 (33%) had gestational hypertension. Of six doulas with a mean of 34.67 (SD=5.16), 4 (67%) were self-identified as Black/African American. Postpartum mothers and doulas shared similar perspectives. <u>The greatest needs</u> for BIPOC women were a lack of informed-consented care and mental health support, not being heard by their healthcare providers, and fear of advocating for themselves. <u>The recommendations</u> for improved perinatal care included creating a safe space for care, enhancing coordinated care, and integrating doulas into the perinatal team. <u>The benefits</u> of having a doula were being an advocate for patients, reducing pregnancy-related anxiety and stress, and providing culturally appropriate health coaching. <u>The challenges</u> for a doula assisting patients in the clinical setting were power struggles between the healthcare team and doulas, a lack of support from the healthcare system, and a balance between being a patient’s advocate and maintaining a professional relationship with the healthcare team.

Conclusions/Implications: The results generated from the needs assessment have been used to inform the development of the BIRRTH WOMXN OC Doula program for BIPCO families.

Funding: Orange County Health Equity, University of California, Irvine, Institute for Clinical Translational Science

Educational Activity with Guatemalan Comadronas about Helping Babies Breathe

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Aim: The aim of this project was to decrease the infant mortality rate (IMR) in the remote Peten region of Guatemala by educating low-literacy comadronas, who attend the majority of births in their country at home, about helping babies breathe.

Rationale: The IMR in Guatemala is 20th highest in the world at 18 deaths per 100,000 births in 2020. Nearly one million newborns die within the first 24 hours of life from birth asphyxia or lack of breathing. An estimated five to ten percent of neonates require help breathing, and three to five percent of these need further resuscitation. Most Guatemalan women prefer to birth at home with comadronas, who are not trained in basic neonatal resuscitation. Improving comadronas' ability to assess neonates' transition to extrauterine life and provide basic resuscitation for neonates who are struggling to breathe while transferring these neonates to hospitals could improve the IMR in Guatemala. This intention aligns with the Every Newborn Action Plan the World Health Organization launched in 2014. In previous projects, Guatemalan comadronas in the Peten requested education about helping babies breathe.

Framework: In a partnership among the Guatemalan ministry of health, the non-profit organization Madre y Nino, and expert faculty at the University of Utah, Madeline Leininger's Theory of Cultural Care, Diversity and Universality was used as a framework. Leininger's theory includes practicing cultural humility, and taking in information from inside the culture, or emic knowledge, before imparting information from outside the culture, or etic knowledge.

Methods: Educational sessions were held with comadronas (N=195) in 11 locations during a two-week period. Educational sessions began by collecting demographic data and administering a pretest on paper. Low literacy-participants were given assistance filling out forms. Focus groups were conducted using semi-structured interview questions to collect emic information. A posttest and quality improvement questions were asked. The tests included four questions with a total of eight correct answers.

Intervention: Etic knowledge regarding neonatal assessment and resuscitation was provided orally in the language of participants based on the Helping Babies Breathe and Golden Minute curriculum. Participants were given Reminder Cards to reinforce knowledge retention, bulb suctions and ambu bags they were taught to use to remove secretions and to provide positive pressure ventilation (PPV). Ample opportunity was given for return demonstrations.

Outcomes: The average pretest score was 2.64/8 compared to the average posttest score of 4.21. Comadronas had been removing secretions with a cloth and their fingers, and providing oxygen mouth to mouth. Comadronas lacked knowledge about using bullb suctions and ambu bags. They were unfamiliar with terms such as the Golden Minute and PPV which likely affected results.

Conclusions: Providing educational activities orally in the language of participants in a culturally humble manner is essential to improving the knowledge of low-literacy audiences, such as Guatemalan comadronas. Frequent and regular training about helping babies breath with ample opportunity for return demonstration also is critical to maintaining the confidence and competence of comadronas when attending to neonates who struggle to breathe.

PUBLIC HEALTH ISSUES

Barriers to Accessing Perinatal Services for Justice-Involved Individuals

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Purpose: The purpose of this study was to understand the impact of incarceration on pregnancy experience and to find ways to improve access to care for pregnant people leaving custody.
Background: Visiting nurse programs have been shown to be helpful in empowering new mothers, assuring employment, decreasing accidents with children, and much more.
Methods: Pregnant individuals entering a local county jail were recruited to participate in an interview discussing their experiences with pregnancy during incarceration. Quantitative information was collected using the Perinatal Anxiety Screening Scale (PASS) and the 10-Item Health-Related Social Needs Screening Tool. Participants were offered the opportunity to enroll in a local Visiting Nurse Program, which provides one-on-one nurse support for pregnant individuals through two years of their child's life. A modification was made part-way through the study to include interviews with jail and nursing staff to gain a fuller picture of the impact of incarceration on pregnancy experience.
Findings: Three incarcerated individuals were interviewed and all expressed interest in enrolling in the Visiting Nurse program. Quantitative results revealed issues with sleeping and anxiety surrounding the pregnancy. The Health-Related Social Needs tool showed that participants expressed needs in all domains (housing, transportation, food, and utilities), as well as safety concerns; all participants had significant health-related social needs and potentially mental health needs that could be addressed with proper prenatal care. Qualitative results, , revealed three key themes: 1) pregnancy in custody as a double-edged sword, meaning that while being pregnant in jail caused fear and uncertainty, it also offered potential safe housing and access to care; 2) a lack of awareness around available resources by pregnant individuals in terms of prenatal care, as well as by jail staff being unaware of possible referrals; and 3) barriers to meeting needs, including difficulty accessing care, perceived unwillingness by jail staff for individuals to ask for help, and lack of resources such as time and money. Enrollment in the Visiting Nurse program was not successful for any participant due to uncertain living arrangements.
Implications for Policy: Several barriers were noted that had an impact on the success of the study. The first was difficulty gaining buy-in from stakeholders in the justice system. The second was resistance to changing normal procedures to assure: a) the completion of pregnancy screenings; b) access to a phone to contact the researcher; and c) resources for virtual interviews. The third was a breakdown in communication between two large institutions: the jail and the healthcare provider. These barriers indicate that for interventions to be successful, there must be a willingness to adopt policies and procedures that encourage engagement with outsiders.
Recommendations for Future Research: Future studies should focus on ways to improve both interest in prenatal care while incarcerated and the successful enrollment in such care, through expedited security clearance for outside providers, utilizing transitional services near release, and improving health care in jail. This study demonstrated that investments in small procedural changes could have a significant impact on the health of incarcerated pregnant individuals.

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Arab American Women’s Perceptions of Obesity and Body Image: A Qualitative Approach

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Purpose: This qualitative study aimed to gain a deeper understanding of the factors that affect Arab American women’s perceptions of obesity and body image.

Background: Overweight and obesity are global problems affecting 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% are considered obese (BMI $\geq$ 30kg/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 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 an understudied minority group in the United States and their health needs and risks have been poorly documented.

Methods: A phenomenological qualitative research design was used to conduct the study. Sample: Fifteen Arab American women (AAW) were recruited using snowball sampling across the United States. The primary investigator designed a semi-structured interview guide based on a review of the literature and content expert feedback; the main two questions were: (1) *What influences have you had in your life regarding your eating attitudes and behaviors? (2) What influences have you had in your life regarding your body image?* The data were collected by a video conference platform, and the audio recordings were stored on an encrypted, password-protected computer and then professionally transcribed verbatim. Saturation was achieved when the expressions and themes were repeated during interviews. Data Analysis: The transcribed and coded narrative data were reviewed for themes following, which included familiarization with the data, generation of initial codes, search for themes utilizing an inductive approach, and review of the themes. The accuracy and stability of the data was confirmed through member-checking and peer-checking.

Assessment of Findings: The narratives provide insight into the experience and perceptions of AAW. Multiple themes have emerged from the two research questions; five themes emerged from the first question: (1) Halal/ organic food, (2) homemade meals, (3) balanced food, (4) family members’ food preferences, (5) and the influence of the culture/ community. Six themes emerged from the second research question: (1) being energetic, (2) having a healthy body, (3) keeping a healthy weight, (4) looking good, (5) having more self-care, and (6) Modesty in clothing and wearing a head cover.

Conclusions: Information from the themes and narratives can be used to inform the development of health policy initiatives and programs. Also, the findings will provide the basis for more research among Arab American women, including interventional studies focusing on healthy eating behaviors.

Key terms: Arab American, women, obesity, body image

NEXus Consortium: Increase Access & Reduce Impact in Changing Academic Environments

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Purpose: The Nursing Education Xchange – NEXus – is a collaboration among universities, expanding course access for graduate students. NEXus enables universities to increase online course offerings, with an emphasis at the doctoral level. This is especially important during times of declining enrollment, faculty shortages, and budgetary constraints. Students gain enhanced learning opportunities, and universities reduce the impact of a changing academic environment on doctoral programs. This presentation focuses on the benefits of NEXus to students and universities through two instances of course sharing.

Background: The enrollment climate is shifting, particularly for PhD nursing programs. Nursing schools are experiencing decreasing enrollments and shortages of faculty. Faculty vacancies, especially those that require a PhD, are the highest recorded since 2008 and are expected to grow. It is projected that by 2025 one third of faculty will have retired.

PhD enrollment continues to decline. From 2013 through 2022, PhD enrollment in nursing decreased 14.8%, from 5,145 to 4,381 students. There are less than 150 PhD nursing programs across the U.S.

In 2004, sixteen public and private universities formed NEXus to offer online courses. To date, students from more than 40 states and several countries have enrolled.

Outcomes: Outcomes are generated each semester from faculty and student satisfaction surveys, historical enrollments, course offerings, and financial data.

NEXus has enrolled 1,210 students in 297 courses since inception with more than 440 graduates. Seventy-five percent of students are in PhD programs. Ninety-six percent of students indicated that NEXus facilitated their on-time graduation. Eighty-five percent of students sighted taking a course not offered at their institution. Students were very satisfied (4.12/5.0 effectiveness) with courses meeting their learning needs.

NEXus courses address six broad areas: advanced nursing practice, specific populations, nursing education, research methodology, leadership, and special topics. To further explore the benefits of NEXus, the impacts from two exemplar schools are featured.

The University of Texas at Tyler has enrolled 44 students from eight different NEXus partners in *Mixed Methods Design*, resulting in approximately $85,000 in additional tuition revenue for the university. Students enrolled from 22 states and ranged from 33 to 66 years old. Each sending university’s cost savings were estimated to be $5,300 attributed to reduced course development costs and $12,300 in faculty salary savings.

The University of Northern Colorado enrolled 28 visiting students from six different NEXus schools in their course, *Advanced Concepts of Vulnerable Underserved Populations*. Enrollees were from 13 different states as well as one international student. Student ranged from 26 to 66 years old. The university realized approximately $54,000 in additional tuition revenue. Sending schools realized approximately $154,800 in combined cost savings.

Conclusion: To address the challenges in an ever-shifting environment of higher education, consortiums like NEXus provide access to course offerings taught by experts, while maintaining timely degree progression. Program leaders avoid course development costs, faculty searches, and salary expenses. Graduate departments help ensure courses run by meeting enrollment minimums while gaining additional tuition income. NEXus helps students and schools maintain and excel in changing academic environments.

IHI Model for Improvement: A Path for Enhanced Course Design and Faculty Development.

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Purposes/Aims: The project had four primary aims: 1) to exemplify quality improvement principles in educational settings, 2) to enhance course quality and align it with learning outcomes, 3) to establish a structured approach to course design while maintaining student satisfaction, and 4) to foster faculty development and professional satisfaction.

Rationale/Background: Self-efficacy and competency promote positive development of professional identity in nurse faculty, supporting retention, satisfaction, and successful teaching strategies. Having witnessed the success of quality improvement methodology in clinical practice, the authors desired to apply this strategy in the development of a new team-teaching dyad. Teaching a course in nursing leadership and management, these were also fundamental skills the students needed to learn. This project was driven by the need for quality course design and the recognition that quality improvement is integral to the nursing profession. The timing was opportune, coinciding with curriculum revisions to integrate the new AACN Essentials, thereby necessitating a reevaluation of course structure. The project aimed to bolster faculty confidence and create an environment conducive to both faculty and student growth.

Brief Description of the Undertaking:

Approach: The IHI Model for Improvement served as the framework for this quality improvement initiative.

Methods: Formally reviewed current quality improvement literature and completed an informal review of local healthcare facilities confirmed the model’s relevance, leading to its adoption for the student benchmark Quality Improvement (QI) project and influencing faculty approaches to course design.

Measurement: Standard university course evaluations, utilizing a 1-5 rating scale, and faculty feedback sessions were employed to assess the project’s impact.

Assessment of Findings/Outcomes Achieved: Student evaluations yielded high scores in areas such as effective instruction (4.74), relevance of course content (4.79), and encouragement to excel (4.84). Faculty expressed satisfaction with the collaborative teaching approach and the reduced workload. Organizational leader and peer feedback has yielded positive interest in disseminating methodology to other courses.

Conclusion: The IHI Model for Improvement has demonstrated its effectiveness in cultivating a just culture and improvement mindset within the academic environment, thereby positively impacting both student and faculty development. Moving forward, it is recommended to consider institutionalizing a version of the IHI Model for Improvement framework as a standard approach for course design and faculty development. Additionally, the model should be tested in other courses to evaluate its broader applicability.

TOPICS IN ACADEMIC EDUCATION

The Development of Family Caregiving Competencies for Nursing Education

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Purpose: The purpose of this project was to develop entry-level nursing education competencies for identifying and integrating family caregivers into the person-centered and family-centered healthcare team.

Rationale: U.S. health care is increasingly dependent on family caregivers who play an essential role in addressing the needs of a growing number of U.S. citizens who are aging, managing chronic or disabling conditions, or facing life-limiting illnesses. Yet, nursing education lacks standardized competencies focused on caregivers and risks nurses being ill-equipped to identify, integrate, and care for these individuals as crucial members of the person-centered and family-centered care team.

Approach: In 2022, a National Consortium launched with the goal of developing nursing competencies for recognizing family caregivers as key members of a person and family-centered healthcare team. Consortium members with diverse expertise in education and family caregiving were recruited via the professional networks of national experts and professional organizations' listservs. Using a backward design approach, guiding documents were consulted, including existing interprofessional competencies. Draft competencies were crosswalked with the AACN Essentials (2021) to align learning outcomes with standards for nursing education. Feedback was elicited at national meetings, via professional listservs, and with validity checks by an advisory group of national experts. Given the diversity of family caregiving situations, this work did not include direct input from family caregivers. However, competency development was informed by organizations representing family caregivers (AARP, RAISE, National Alliance for Caregiving).

Outcomes Achieved: Twenty competencies for identifying, assessing, integrating, and supporting family caregivers were identified for level one nursing education. These competencies fall within four domains: the Nature of Family Caregiving, Family Caregiving Identification and Assessment, Providing Family-centered Care, and the Context of Family Caregiving.

Conclusion: Given the time and content limitations of nursing education and the dynamic nature of healthcare, new educational competencies may encounter resistance. The Consortium is conducting focus groups and interviews to guide the creation of a toolkit and set of resources and teaching materials to support educators in the integration of these competencies into existing content.

Peer Emotion in Collaborative Simulation Among Nursing Students

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Background: Emotions play a significant role in learning as they are intertwined with cognitive functions such as memory, decision-making, and creativity. Group emotion, which comprises moods and emotions shared by a group, is an essential part of collaborative learning because how peers co-regulate group emotion influences their success in learning. Because emotions experienced by nursing students are linked to group learning, understanding nursing students' learning experiences through the lens of group emotion is essential. However, most simulation research focuses on exploring individual learners' emotions with limited emphasis on group emotion during collaborative learning and decision-making.

Purpose: This study aimed to provide an in-depth description of nursing students' emotional experiences while participating in a group simulation activity.

Methods: Data were drawn from a primary study of peer collaborative decision-making in simulation. Participants were final-year prelicensure nursing students (*N* = 32) from two associate degree nursing programs. Five premade medical-surgical nursing cases using virtual reality simulation were used after two subject matter experts reviewed them. The International Nursing Association of Clinical and Simulation Learning's (INACSL) Standards of Best Practice were followed. Simulation sessions between 10 to 20 minutes were conducted for two participants (dyads) before in-depth individual and dyad interview sessions using video-recording playback. Participants were asked to reflect on their simulation experiences. All data related to emotions were extracted, summarized, and interpreted using Braun and Clark's six-phases of thematic analytic method. The study also followed Lincoln and Guba's criteria of trustworthiness, which was enhanced by triangulation of data collection and analysis, constant data comparison, member checking, peer debriefing, and adherence to the thematic analysis method.

Results: Five themes were developed and labeled as follows: (1) experiencing a multitude of emotions, (2) hiding emotions, (3) suppressing emotions, (4) revealing emotions, and (5) perceiving peers' emotions. Each theme captured participants' narratives and remarks during the simulation and interviews.

The theme of "*experiencing a multitude of emotions*" reflected the many emotions participants had experienced during the simulation, which varied in nature and intensity and sometimes influenced the participants' decisions and actions. The theme of "*hiding emotions*" revealed how they often actively attempted to silence their emotions for various reasons. The theme of "*suppressing emotions*" revealed how they often attempted to suppress their emotions at the moment, allowing thoughts and actions to take over. The theme of "*revealing emotions*" divulged that their feelings were expressed in various ways despite efforts to hide or suppress them. The theme of "*perceiving peers' emotions*" revealed how participants were attuned to how their peers were feeling, even though they often hid or suppressed their own emotions.

Implications: Based on the findings, it is recommended that nurse educators create a psychologically safe and non-judgmental space for students to explore their feelings and gain insight into how their feelings influence their performance. Creating such space for emotional exploration aligns with the INACSL Standards of Best Practice. It is also recommend that nurse educators initiate discussions on emotional expression versus suppression and the nuanced relationships between emotions, thinking, and action.

Essential Abilities for Nursing Programs and Alignment with Licensure Requirements

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Background: Given the shifting demographics of the United States, the nursing profession is challenged to produce a workforce representative of the population, including the 42.5 million people living with a disability. While racial, ethnic, and gender representation has increased among nursing students, active recruitment efforts rarely focus on students living with disabilities. To practice inclusion fully, nursing schools must remove ableist barriers to admission.

Purpose: The objective of this study was to identify the sensory and motor essential abilities required for admission into pre-licensure nursing programs in the Rocky Mountain states, and to compare those requirements with the registered nurse licensure requirements established by state boards of nursing.

Rationale: Despite the Americans with Disabilities Act mandating non-discriminatory admissions practices, nursing schools frequently disqualify applicants based on sensory or mobility disabilities. This exclusionary practice persists even though many nurses with acquired sensory or motor disabilities are actively employed in various nursing roles.

Methods: A cross-sectional analysis was performed using data from state boards of nursing and pre-licensure nursing programs in the Rocky Mountain states (Colorado, Utah, Montana, Wyoming, Idaho). Data on sensory or mobility requirements for RN licensure were collected from the state boards of nursing. Data regarding sensory or motor essential abilities required for nursing school admission were collected from 58 pre-licensure nursing schools approved by the National Council of State Boards of Nursing (NCSBN) for the 2023 RN licensing exam. Both Associate Degree in Nursing (ADN) and pre-licensure Bachelor of Science in Nursing (BSN) programs were included. Data were gathered through online admission policy review and follow-up phone calls where necessary. The Institutional Review Board (IRB) designated this study as exempt.

Outcomes: None of the five state boards mandated sensory or mobility prerequisites for RN licensure. Among surveyed schools or colleges of nursing, 31 (53%) had published essential abilities documents, 4 (7%) had undetermined status, and 23 (40%) had no published essential abilities document. Only one program explicitly welcomed students with disabilities, stating that clinical judgment is the sole ‘essential’ ability required. Among the 31 programs with essential abilities documents, the most common requirements included lifting (n=17, 56%), auscultation (n=15, 48%), hear speech (n=14, 45%), color vision (n=13, 42%), and performing cardiopulmonary resuscitation (n=13, 42%). Some required essential abilities did not represent any aspect of routine, safe nursing care, such as the ability to crawl on hands and knees or being able to seize and subdue a violent patient. Other criteria, like a 50-pound independent lifting requirement, conflicted with Occupational Health and Safety Administration (OSHA) guidelines.

Conclusions: The study reveals a lack of uniformity in essential abilities statements across nursing schools, with some appearing arbitrary. Streamlining admissions processes to be more inclusive of students living with disabilities can enrich the diversity of the nursing student body, thereby making the nursing workforce more representative of the general population.

Characteristics of Nursing Professional Identity Survey Completers

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Background: Magnet or Pathways to Excellence (PTE) designation through the American Nurses Credentialing Center (ANCC) publicly recognizes hospitals achieving outstanding nursing excellence. Magnet designation requires a clinical, Registered Nurse (RN) to serve as Principal Investigator on a unique healthcare-related study approved by the Institutional Review Board approximately yearly. A healthcare issue of special interest to clinical nurses working in Magnet facilities is the professional identity of nurses, which is hypothesized to positively correlate to nursing satisfaction and delivery of high-quality patient care. A valid and reliable survey tool, called Professional Identity in Nursing Scale (PINS), is a low-cost and low-burden strategy for nurses to engage in research and measure professional identity in nursing. However, survey attrition rate is a significant barrier to collecting robust and representative research data. Little is published regarding what factors influence a nurse's likelihood to complete all survey items, particularly among RNs working in Magnet/PTE versus non-Magnet-designated hospitals.

Purpose: To compare occupational and personal demographics of nurse participants responding to a cross-sectional professional identity survey who complete versus do not complete all study items.

Methods: A secondary analysis was performed of an observational study including frontline nurses working in one of 14 hospitals (including 5 Magnet and 1 PTE) within a large Catholic Healthcare system. Recruitment occurred from June to August 2022 and participating nurses were invited to complete the PINS tool electronically once. Nurses provided demographic data first, then proceeded to answer the 30 environment and 30 self-items of the PINS tool. Demographics were compared between nurses who did not complete the PINS and those who did using two-tailed chi-square tests with a p-value of <0.05 considered significant.

Results: A total 502 nurses had data included in analysis and 336 (67%) completed the PINS. Of these, several significant differences emerged. Proportionally more nurses completed the PINS when reporting: 8-hour shifts versus 10 or longer (p=0.01), 10 or more years of experience versus less (p=0.02), a Caucasian race versus other (p=0.02). However, sex, education level, ethnicity, working in a Magnet or PTE-designated hospital, hospital bed size, and nursing specialty did not proportionally differ (p<0.05).

Conclusion: In our study, length of shift, years of experience, and race all influenced completion rate of the PINS tool, while hospital bed size or nursing excellence designation did not. Nurses conducting research in Magnet or PTE facilities may increase representativeness of findings by purposively recruiting populations who may be at risk for early PINS survey termination.

Implications for Practice: Identifying factors that may serve as barriers to participation in survey-based research may help researchers implement strategies to mitigate barriers to survey completion. Nurses leading research efforts should consider requesting leadership support for removing barriers for nurses to participate in research, such as providing time for nurses working longer shifts or advocating to younger nurses on the importance of research on topics such as professional identity in nursing.

Emergency Remote Teaching and Transition to Nursing Practice during COVID-19 Pandemic

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Purpose: The purpose of this study was to explore the lived experience of new nurses in the United States who experienced emergency remote teaching (ERT) for most or all of their nursing education during the COVID-19 pandemic and how they perceive ERT influenced their transition to practice.

Background & Rationale: The National Council of State Boards of Nursing reports that in 2021 the overall pass rate for first-time NCLEX-RN demonstrated the sharpest decline since 2013. The majority of the 185,000 nursing students taking the exam received their nursing education during the COVID-19 pandemic, experiencing a rapid transition to ERT, which involved drastic limits to clinical experiences, simulation education, psychomotor-skills labs, and didactic course delivery. Prelicensure nursing students who experienced pandemic-related disruption to their education are now registered nurses and have transitioned to practice. Exploration of how nurses make sense of their experiences with ERT, and the significance of these experiences on their transition to the nursing role, is essential to understanding the implications of disrupted learning on the transition to nursing practice.

Methods: This qualitative study used Interpretative Phenomenological Analysis (IPA) to explore the lived experiences of 12 nurses living across the U.S. who transitioned to RN practice after experiencing ERT due to the pandemic. Individual semi-structured interviews were video recorded and transcribed. Data analysis guided by the seven steps of IPA revealed *Personal Experiential Themes* in individual cases and *Group Experiential Themes* across all 12 cases. Themes were individually identified then clustered based on common meanings to understand how the participants perceived and made sense of their experience.

Assessment Findings/Outcomes Achieved: Findings revealed three main themes, each with three subthemes that give meaning to the participants' experiences as a student, then transitioning to practice, and their current life-world establishing themselves as nurses. The first main theme, *Awareness of Being Foundationless,* includes the subthemes of an *Era of Uncertainty*, the *Disruption of Dynamic Learning*, and the *Loss of Embodied Experiences*. The second theme, the *Challenge of Becoming*, encompasses the subthemes of *Struggling with Irreconcilable Expectations*, the *Guiding Presence of a Preceptor*, and the *Perpetual Cycle of Systemic Dysfunction*. The third theme, *Nursing Identity*, includes the subthemes of *Personal Toll of Being a Nurse*, *Strength Through Adversity*, and *Dedication and Detachment* in the nursing role.

Conclusions/Implications: Current literature describes nursing students' perceptions of ERT during the pandemic, however, no published research explores the phenomenon of the transition to nursing practice for those who experienced these pedagogical changes and how it continues to affect their practice. The timely opportunity to explore this phenomenon in-depth allowed nurses to reflect on their experiences with ERT in nursing school and share their perspectives on how ERT has shaped their first year of nursing practice. Results may help educators and administrators shape contingency teaching plans for potential future pandemics and explore innovative ways to preserve the practical nature of critical educational experiences. Study results amplify the need for supporting these new nurses in their socialization to the nursing role and throughout their careers.

Funding: This study was funded in part by the Tish M. Smyer Nursing Dissertation Award and the Yaffa Dahan Nursing Education Award from the University of Nevada, Las Vegas School of Nursing.

A Multi-Level Exploration of How to Grow the Midwifery Preceptor Workforce

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Purpose: To better understand the barriers and facilitators to precepting midwifery students from across the healthcare ecosystem in New Jersey.

Rationale: Growing the midwifery workforce is a crucial step to alleviating disparately poor perinatal health outcomes and expanding access to high-quality, patient-centered sexual and reproductive health care. Limited clinical preceptor opportunities have been identified as a barrier to graduating more midwives from accredited programs. Identifying individual and systems-level influences that may act as barriers or facilitators to expanding midwifery precepting is a key step in growing the midwifery workforce.

Methods: In-depth qualitative interviews were conducted with 19 individuals involved in each step of the precepting process: midwives (n= 12), physicians (n=4), practice administrators (n=2), and university administrators (n=1). Transcripts were coded using the tenets of qualitative description and thematic analysis.

Assessment of Findings: Midwives were largely eager and willing to precept midwifery students, expressing socio-emotive motivations such as saying precepting was their obligation to future generations of midwives and a way to express gratitude to their past preceptors. However, they felt they faced many barriers within their practice and hospital administrations. Additionally, they felt their precepting could be made easier and more successful with greater consistency across programs in terms of preparing students clinically and didactically, more preparation for themselves in the teaching role, and support from their practice such as workload support. Administrators were generally supportive of having midwifery students in their settings, but lacked an understanding of the midwifery model of care and how midwifery is associated with better patient outcomes and satisfaction. This meant that administrators, and sometimes physicians, thought of midwifery students as less of a priority than medical students or residents. Fear of burnout and overworking an already stressed healthcare workforce was a concern across roles. Financial support was noted at several levels (midwife, administrator) as an important way to acknowledge their work and to secure formal relationships between practices and universities but was not seen as a necessity across participants.

Conclusions: Findings from this study support the importance of approaching midwifery precepting as a multi-faceted concept, one that necessitates the full support of individuals within many different roles in a healthcare organization. Getting buy-in from various levels requires a flexible approach but must include a targeted effort toward showing the value of midwifery care in terms of patient outcomes and satisfaction, and cost to the health system. While direct cash payments to practices were not universally seen as necessary, compensation could manifest in many ways, such as workload buyouts, educational training and support, or professional development. Policymakers, universities, hospital administrators, and advanced practice nurses and midwives must think strategically about supporting a precepting process that does not contribute to the burnout of the current workforce and supports the needs of both students and preceptors to grow the midwifery workforce and contribute to improving perinatal outcomes.

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Orientation for New Clinical Nursing Instructors

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Purpose/Aims: The purpose of this project was to address a gap in teaching knowledge of new clinical instructors by developing and delivering a new clinical instructor orientation course at the university.

Aim 1: Increase new clinical instructor teaching knowledge.

Aim 2: Improve understanding of the role and responsibilities of new clinical instructors.

Rationale/Background: The orientation of new clinical instructors to their role and the complexities of teaching and learning was identified as a need at the university. Clinical instruction is challenging, and most new clinical instructors have a limited background in teaching students in an academic setting. An orientation is essential to prepare clinical instructors to translate content, evaluate students, and teach high quality patient care. The clinical practice question for this project was: among new clinical nursing instructors, does an orientation increase role comprehension and teaching knowledge?

Brief Description of the Undertaking:

Approach: Project development was guided by the Plan-Do-Study-Act model and the Nurse Educator Transition theoretical model (Deming, 2022; Shoening, 2013). Credible sources from peer-reviewed publications in the nursing and education fields within the past ten years were reviewed that discussed standards, teaching, orientation, and role of new instructors. Best practices and guidelines were identified and integrated into an asynchronous orientation video.

Methods: The orientation video content included clinical instructor role and responsibilities, legal issues, learning theory, curriculum driven clinical, student issues, evaluation and giving feedback. A Qualtrics link to the orientation video, consent, demographics survey and evaluation tool was emailed to clinical instructors (at a northwestern college of nursing) who were newly hired or had taught one year or less.

Measurements: After watching the orientation video, participants (N=18) completed a 12-question modified subset of a reliable and validated Course Evaluation Tool by Nemec et al. (2018) that measured self-reported knowledge gain.

Assessment of Findings: Likert-scale data from the evaluation survey were put into Intellectus Statistics and descriptive data (frequency, percentage, and standard deviation) were calculated. Agree and strongly agree were the most frequent (and highest percentage) answers for all questions showing knowledge gain.

Conclusions: Although statistical significance is not applicable, the project is clinically significant for the participants from the university. Overwhelmingly, they reported increased knowledge in role and responsibilities, learning theories, feedback and assessment. Foundational knowledge may increase new instructors' ability to guide students to translate classroom-based knowledge into safe and effective care of patients. Student learning will be enhanced by clinical instructors who are able to provide effective evaluation and feedback. The university is incorporating the orientation module into onboarding for all new clinical instructors. Future projects/research related to mentoring and orientation for didactic instructors are warranted.

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Deliberate Practice Improves Foley Catheterization Skill Performance: A Pilot Study

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Purpose: The purpose of this pilot study was to determine whether monthly deliberate practice (DP) improved Foley catheter insertion skill performance versus education alone.

Background: DP, first proposed by Ericsson, is a method of psychomotor skill development that involves repeated, focused practice with expert feedback. DP has been shown to improve CPR performance, but the effects on other psychomotor skills has not been investigated thoroughly. Foley catheterization was chosen for this study because recent data suggest that about 25% of hospitalized patients have a urinary catheter during hospitalization, and nearly all UTIs in the hospital setting result from the insertion of the catheter. These infections incur cost and increase the risk of kidney damage and sepsis. Limited prior studies of nursing student skill performance found that the majority of students deemed competent contaminated the catheter or sterile field during random skill assessments later. Thus, more effective methods to teach and help students maintain proficiency are needed.

Methods: Following IRB approval, ten undergraduate nursing students from a large Western University's BSN program volunteered to participate. Data collection occurred over two semesters in Spring and Fall, 2022, in a post-pandemic setting. All participants had learned catheterization in the nursing curriculum and had passed a skills checkoff. Participants were brought to the lab and, following informed consent, performed a Foley catheterization on a female manikin using similar equipment as they had used in prior skills labs. Performance was scored by a single researcher using a published 16-step checklist with a "met" or "not met" criteria. Participants were then randomized into one of two groups: an intervention group, who returned to the skills lab monthly to practice the skill with immediate expert feedback, or a control group, who received monthly education about catheter insertion via email. The number of catheters inserted in other settings (skills lab, simulation, clinical, and work) were collected from both groups during the semester. All participants returned to the lab at the end of the semester to repeat the performance assessment as they had done at baseline.

Results: All ten participants completed the study. At baseline, the experimental group performed significantly better at handwashing than the control group. The most common mistakes made at baseline involved contaminating the sterile field or the catheter. There was no significant difference in skill performance at baseline between the two groups (Fisher exact text = 0.2802, $p<.05$). There was no significant difference in the number of catheter insertions in other settings during the semester between the two groups. At the end of the semester, the intervention group collectively performed 77 out of 80 steps correctly, while the control group performed 59 out of 80 steps correctly. Thus, the experimental group performed significantly more steps correctly at the end of the study than the control group (Fisher exact test = 0.001, $p<.05$).

Conclusion: In this small pilot study, monthly DP with expert feedback improved the overall Foley catheterization skill performance among undergraduate nursing students.

TOPICS IN DIVERSITY AND INCLUSION

Whitewashing of Middle East North Africa (MENA) Communities Drives Health Inequities

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Purpose: This presentation aims to expand awareness of Middle East North Africa (MENA) individuals living in the U.S., including the harmful impact of invisibility on health outcomes and equity.

Description: MENA is an expansive region from Southwest Asia across North Africa, comprising 22 countries in the Arab League, Turkey, Iran, and Israel, including Armenians, Assyrians, Chaldeans, and Kurds. Americans with MENA ancestry are rendered invisible in public health data, creating health disparities and inequities. For decades, civil rights and local community organizations have advocated for a MENA category on the US census. The latest federal denial of a MENA category in 2020 and the interference of the Trump administration, not only impacted MENA communities but undercounted Blacks, Latinos, and Native Americans. Local, state, and federal schools and agencies rely on census data to access and fund education, healthcare, research, and business services. Census data is also used to redraw voting districts and reappoint representatives at local and national levels. Structural discrimination through the census (including whitewashing MENA) denies access, creates disparities in health, education, employment, and housing, and skews data, yet is rarely discussed.

Impact on Research and Practice: The harmful impact of whitewashing MENA has created complex and multilayered challenges for healthcare providers and MENA individuals. Healthcare providers state that misclassification and understudying of MENA have created disparities in these communities. Limited data indicates MENA groups, compared to other immigrants, are likely to be more proficient in English but more likely to live in poverty. Studies conducted through private funding organizations provide evidence that the outcomes of MENA are distinctly different from Whites. For example, a hospital-based study in Michigan found Arab-Americans have a higher prevalence of diabetes, hypertension, are of a higher weight, and increased risk, severity, and death from Covid-19. In the winter of 2021 in a San Diego county, it was estimated that 30 – 35% of Covid-19 ICU patients were Arab-Americans but misclassified as White. MENA communities experience negative stereotyping, discrimination, racial profiling, and hate crimes, and are underreported, undocumented, and unprosecuted, all of which are drivers of health disparities.

Conclusion: To be deeply committed to understanding and remedying health inequities, we must advocate for accurate data collection and representation, especially for invisible communities. The census is another tool of structural discrimination used to disadvantage and ‘other’ people of color. This is critical as many local and state organizations with federal funding, adhere to the governments’ standards for data collection. Recommendations include: 1) advocating for MENA in education, practice, and research. This means integrating MENA health in multicultural curriculum and teaching and including MENA in demographic data in research, 2) awareness of ethnoracial groups and their needs in local communities, including the impact on health and health disparities, and providing access to resources 3) avoiding erasure of the heterogeneity of MENA through education 4) supporting MENA colleagues in professional spaces including recruitment and promotion in academic and professional organizations 5) Lobby NIH and other federal research agencies to encourage MENA data collection.

Mujeres Unidas: A Pilot Study to Educate and Empower Latina Women

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Purpose: To test a pilot program to determine if group-based interventions for Latina women could decrease anxiety and depression scores among Latina immigrant women in a new immigrant destination.

Background: In the United States, 15% of Latinos will experience a depressive or anxiety disorder during their lifetime. Education, prevention programming, and interventions around health topics such as stress, mental health, and health maintenance for Latino immigrants in new immigrant destinations are lacking, inadequate, or nonexistent. Latina women experience higher than average rates of trauma, including political trauma and sexual trauma, when compared to non-Hispanic White women, which can lead to stress and anxiety.

Methods: With input from Latina women, we created a 5-week group-based curriculum to provide information about stress, stress management, nutrition, mental health, and healthy behaviors. We enrolled three cohorts of women (n=9, n=5, and n=4) to complete each session. Sessions were taught in Spanish by native Spanish speakers in a community location and lasted 90 minutes. We used the General Anxiety Disorder (GAD-7) and the Patient Health Questionnaire (PHQ-2) to estimate changes in pre- and post-intervention tests with paired t-tests. To estimate acceptability and feasibility of the intervention, we conducted semi-structured interviews with participants after the five weeks. Interview data were analyzed for common themes by researchers unaffiliated with the design or delivery of the intervention.

Assessment of Findings: A total of 19 women completed the program and the pre- and post-assessments. While we did not see statistically significant differences in the PHQ-2, mean GAD-7 scores decreased by 2.92 ($p<0.05$). Themes in interviews were overwhelmingly positive. Women expressed satisfaction with session topics, noted that they enjoyed the social connection, and reported implementing behavior changes.

Conclusions: Group-based intervention and education taught by native Spanish speakers may be protective against anxiety disorders for Latina immigrants in new immigrant destinations. Sessions that capitalize on social connection were appreciated and provided additional support for the women enrolled.

Implications for Nursing: Nurses are poised to implement community-based health education workshops to improve mental health of patients. Nurses can help people access existing programs or create new programs to address community need.

Implementing an African American Cultural Awareness Program for SNF Staff

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Purpose/ Aims: To design, implement, and evaluate an educational program for facility staff directly involved in patient care in a skilled nursing facility. Participating staff were LVNs, RNs, RTs, social services providers, and admission directors. The specific aim was to increase participants' knowledge of culturally congruent care by a 40% mean increase from baseline or achieve a score of 80% or higher on an assessment administered immediately following a 60-minute educational intervention.

Rationale/ Background: Patient care is most effective when patients and providers establish a therapeutic connection in a cultural context. Nurses' lack of awareness of a cultural context for patient care impairs establishing a therapeutic provider/patient relationship, with care of lesser quality and poorer health outcomes as consequences.

Brief Description/ Context: The goal of this educational program was to increase SNF staff's knowledge of culturally congruent care, informed by the Papadopoulos, Tilki, and Taylor (PTT) model, a culturally focused approach to health care designed to address concerns and outcomes related to providers' knowledge of culturally congruent practices. Preferred participants were SNF staff from social services, rehabilitation, admissions, and nursing who provided direct patient care for the following patient populations: short-term, long-term, dementia care, or hospice.

Methods: Educational intervention program developed to increase cultural competence of skilled nursing facility. A validated survey instrument, the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals – Revised was administered pre- and post-intervention to assess cultural awareness and knowledge. Cultural competence knowledge acquisition was expressed as numerical and percentage changes in mean scores from baseline to post-intervention. Eight skilled nursing facility staff participated in a 60-minute didactic education session accompanied by discussion and a reflective activity. The content was informed by the PTT model and emphasized transfer of knowledge to practice.

Findings: Mean cultural knowledge increased from pre- to post-education by 5.08%. Cultural competence scores increased from pre- to post-education by 51.5%. Survey scores increased for five of six participants who completed the training and both surveys. Cultural awareness, skills, encounters, and desires showed a mean percent decrease from pre- to post-intervention of 6.1, 19.4, 4.34, and 14.94, respectively.

Conclusions: The healthcare providers realized increased cultural competence and the opportunity to provide improved patient care experiences. Continuing the cultural awareness program in a skilled nursing facility can improve the quality of cultural care. Development from the project was a strong correlation between health providers' need for cultural knowledge about their patients and the lack of understanding of patient care in a cultural context.

Keywords: Cultural competence, cultural education, diversity training, transcultural care.

Black Women's Experiences of Discriminatory Communication in Healthcare

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Purpose/Aims: The aim of this qualitative meta-synthesis was to explore experiences of racial discrimination among Black women in the patient/provider relationship specifically related to interpersonal communication.

Background: Stressors unique to Black women in the form of discrimination are broad and chronic underlying causes of health inequity. The patient/provider relationship is one key environmental factor where providers perpetuate explicit and implicit bias and discrimination. Racial bias among predominately white providers impacts treatment decision making inclusive of a reduction in diagnostic testing, under-diagnosing conditions, not ordering routine examinations for chronic conditions, and under-referring to specialty care, as compared to White patients even when controlling for income and education. Exploration of qualitative research of Black women's experiences in healthcare is crucial to address inequity and for the creation of effective solutions to these complex challenges.

Methods: A qualitative meta-synthesis was conducted through examination of extant qualitative literature on Black women's experiences of racial discrimination in healthcare with studies occurring from 2020-2023. A two-person research team conducted a quality appraisal of six studies which was followed by a dynamic inductive/deductive thematic analysis. Reciprocal translation occurred revealing themes and patterns until consensus was achieved.

Assessment of Findings: This qualitative meta-synthesis highlighted in-depth and nuanced descriptions of Black women's experiences of racial discrimination in patient/provider interpersonal communication within and across studies. Moving beyond semantic data, underlying assumptions and conceptualizations related to patient/provider communication emerged. Discriminatory experiences in communication were evidenced in five themes: being dismissed, not being listened to, being provided misinformation or incomplete information, being coerced by providers, and providers making unilateral clinical decisions. Experiences of being dismissed by providers depleted confidence and trust, caused frustration, created barriers to receiving appropriate diagnoses, and the incorrect attribution of symptoms to other issues. Providers inability to listen correlated to providers non-responsiveness to patients report of pain. Being provided misinformation or incomplete information by providers created confusion, mistrust, and fear of concealment of information, dramatically effecting patients' ability to make decisions. Coercion by providers came in the form of ultimatums, scare tactics, and provision of care without consent. Absence of shared decision making emerged in discouragement of patients' treatment decisions, lack of comprehensive education on treatment, and privileging of providers opinions as the best, and at times, the only course of treatment.

Implications for Practice and Recommendations: Treatment inequity in the clinical environment is a healthcare crisis. Discriminatory actions from the very providers who are charged to do no harm results in Black women delaying treatment or initiating care, rejecting or discontinuing interventions, and not accepting or adhering to provider's recommendations. Ergo, Black women experience profound health disparities. Tangible measures to disrupt this dynamic between Black women and predominately white providers is to foster providers' own self interrogation around bias, stereotyping, and discrimination, create methods for Black women to feel heard and validated, slow down decisions to potentially mitigate bias, creating structures whereby patients are experts of their lived experience, and empowering Black women to challenge longstanding barriers, while also equipping providers to be receptive in that process.

Racial Discrimination, Social Support, and Distress Among Black Pregnant Women

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Study Purpose: The purpose of this study was to examine the associations among racial discrimination, social support, and psychological distress among Black pregnant women.
Significance of Study: Black women experience racial discrimination and higher levels of psychological distress than White women. Social support may buffer the association of racial discrimination with psychological distress among Black pregnant women.
Methods: The BIBB (Biosocial Impact on Black Births) study was a prospective, longitudinal design study that examined maternal factors related to preterm birth among Black women. The findings reported here were based on cross-sectional data collected from 599 non-Hispanic Black pregnant women enrolled in the BIBB study prior to the COVID-19 pandemic. Women completed questionnaires about lifetime experiences of racial discrimination, social support, and psychological distress. We performed logistic regression using dichotomized psychological distress (with a cut-off point of 72) as the response variable, including experiences of racial discrimination, support, and their interaction as predictors, along with other control variables for moderation analysis.
Results: Women had a mean age of 26± 5 years and a mean gestational age of 17±6 weeks Approximately 53% of women reported ever (lifetime) experiencing discrimination in at least one situation, and 54% had psychological distress. The most frequently reported experiences of racial discrimination were *getting service in a store or restaurant* (32.7%) and *on the street or in a public setting* (30%). We found that women who reported low levels of social support (i.e., MOS social support scores below the median) were 3.4 times more likely to report psychological distress than women who reported high levels of social support, after adjusting for covariates (OR = 3.84, $p < .001$, 95% CI = 2.27, 6.48). The interaction term between racial discrimination and social support on psychological distress was not statistically significant.
Conclusion: Findings of the study contribute to evidence that experiences of racial discrimination and low levels of social support relate to psychological distress among Black pregnant women. Promoting social support during care may be beneficial for Black pregnant women's psychological status, but interventional study is needed.

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Non-Traditional Age Nursing Students’ Experiences: Implications for Education

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Objective: This study aims to assess the experiences of non-traditional age nursing students (25 years or older) in undergraduate and graduate programs at a state university.

Background: Universities have made commendable progress in promoting diversity and inclusion. Yet, age diversity remains an underrepresented facet. An increasing number of non-traditional students, aged 25 or older, are redefining academia. Prioritizing age-inclusivity in nursing education is essential to offer tailored support to older students. While substantial efforts have been invested in enhancing diversity concerning race, gender, socioeconomic backgrounds, and varied life experiences, age diversity often remains unnoticed. This oversight undervalues the unique contributions of older students, leaving them without the needed support. Addressing this issue is imperative, not only for inclusivity but also for advancing nursing education and ensuring equity in academia and healthcare.

Methods: This research focuses on non-traditional age (25 years or older) nursing students’ experiences in applying, enrolling, and participating in their programs. We selected twelve participants through purposive sampling and organized them into two separate Zoom-based focus groups. Each focus group, facilitated by a moderator, lasted around 1.5 hours. We employed a semi-structured interview guide that covered topics such as the application process, enrollment, and challenges and opportunities faced by non-traditional age nursing students. Our data analysis followed a deductive thematic approach, involving independent transcript reviews by two team members. This process ensured inter-rater reliability through dual coding and consensus resolution.

Results: We identified five significant themes. "Transitioning Challenges" explored the multifaceted difficulties and uncertainties faced by individuals entering college later in life or returning after an academic hiatus. This theme encompassed hurdles related to information gaps in program details, admission processes, insufficient guidance, and financial support. "Balancing Multiple Roles" delved into the intricate process of harmonizing family, caregiving, career responsibilities, and academics. It emphasized the importance of flexibility and personalized support, especially for older students. "Fostering Belonging" investigated how older students create peer-support networks, often taking on mentoring and leadership roles to nurture a strong sense of community within the academic environment. "Experiencing Exclusion and its Impact on Learning" examined the emotional consequences of exclusion due to age and race differences, shedding light on their impact on psychological safety and academic performance. "Resilience and Adaptability" explored how older students develop resilience and adaptability skills in response to evolving academic structures, technology, and class expectations.

Conclusions: This study provides important insights into the experiences of non-traditional-aged nursing students, with significant implications for nursing research and education: Universities and nursing programs should enhance program information, streamline admissions, and offer tailored financial support. Prioritizing flexibility empowers older students to balance their family, caregiving, and work responsibilities. Promoting peer-support networks and mentorship nurtures a strong academic community. Addressing age and race-based exclusion bolsters psychological well-being-which is integral to successful academic performance, and supports diversity in healthcare and education. Overall, recognizing and supporting the unique needs of older students enriches their academic experience, fostering a more inclusive learning environment.

An Intersectional Exploration of Women's Experiences during Menopause

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Purpose: This study aims to explore the intersectional dimensions of menopause as articulated by a diverse group of midlife women from various cultural and ethnic backgrounds.

Background: Historically, midlife women's experiences have been inadequately represented in research, often framed and interpreted through the lens of dominant conceptual frameworks shaped by privileged individuals. This marginalization stems from the multiplicity of social locations influencing midlife women's lives, encompassing factors such as race, sexuality, dis/ability, age, social class, and gender. In a deliberate departure from empirical preconceptions, this study adopts a feminist standpoint theory to foreground the voices of marginalized women. Through active participant engagement, we initiated an inquiry into the experiences of midlife women, inviting them to share their interpretation of findings. This research is part of a broader effort to develop an Integrative Medical Group Visit, "MENOGAP", to fill a GAP in MENOpausal women's healthcare and health education access. MENOGAP is tailored to peri- and post-menopausal individuals and is underpinned by an intersectionality framework that recognizes the interplay of age, gender, culture, ethnicity, and sexuality as systems of power generating inequalities.

Methods: A focus group comprising six midlife women was conducted, recorded, and subsequently transcribed. A research assistant visually mapped the discussion in real time using Lucidspark, a web-based virtual whiteboard. Transcripts and conversation maps were shared with participants, affording them the opportunity to actively engage in the analytical process. A second focus group was convened to discuss and refine our interpretations. Conventional content analysis was employed by the research team to analyze the transcribed sessions. The final content analysis codes were written up in a manuscript for peer review, which was reviewed by focus group participants and the study team.

Assessment of Findings: Qualitative analysis revealed five primary themes encapsulating the intersectional experience of peri- and post-menopausal women: healthcare, symptoms, individual experience, disabilities, and connectivity. Contributions to these themes included personal narratives, shared stories, collaborative insights, and individual perspectives. Participants emphasized the urgent need for increased research, awareness, and support for individuals navigating the diverse aspects of this life transition.

Implications: The study's results highlight the active engagement of participants in both the research and dissemination processes. They underscore the pressing need for enhanced education regarding peri- and post-menopausal transitions, symptomatology, systemic challenges, and accessible interventions. This study contributes to the broader discourse on women's health by shedding light on the complex interplay of intersecting identities during menopause, thus advocating for a more inclusive and informed approach to menopausal care and support.

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WOMEN'S HEALTH ACROSS THE LIFESPAN

Using Female Reproductive System History in Cardiovascular Nursing Research

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Background: Failure to include sex-specific variables in cardiovascular disease (CVD) research is a missed opportunity to decrease CVD burden, especially among females who face sex-specific risks to developing CVD. Reproductive system history (RSH) (i.e., endometriosis, pre-eclampsia, menopause) in females confers additional risk for developing *any* CVD. Collecting RSH is often an overlooked step in CVD research, possibly due to uncertainty regarding which RSH to collect and/or appropriate methodologies.

Purpose: This article: 1) reviews RSH's impact on CVD in females, 2) describes two methods of RSH data collection, and 3) discusses ways to address missing data in RSH collection. We provide examples from our completed research studies to demonstrate each method.

Description of Methods: Manual data extraction from the electronic medical record (EMR) or participant self-report are two methods for collecting RSH in CVD research. Both approaches begin with identifying relevant RSH through literature review. Next, creating a data-collection protocol maximizes reproducibility. Then, each method has specific steps to achieve the most complete available data (**Table 1**). Statistical analysis should account for missing data due to cohort effects and/or truncation, and may include imputation or estimation approaches.

Table 1: Methods for collecting RSH in CVD Research

Manual Data Extraction from the EMR	**Participant Self-Report of RSH Questionnaire**
1. Identify RSH search terms	1. Identify RSH to be self-reported
2. Specify where in EMR data are located (structured and/or unstructured data)	2. Write RSH questions using life-course approach
3. Use the EMR search function	3. Use sub-questions to elicit details
4. Examine search hits to confirm RSH	4. Include open-ended question for more detail
5. Document RSH on a data-abstraction form	

We used manual data abstraction to characterize menopause status of participants enrolled in our heart failure study. In our sample (N=66), we found cases of menopause status (n=59 [89%]) and menopause details (n=44 [67%]). Seven (10.6%) did not have any documentation of menopause status. We addressed missing data by including only observations that included menopause status in our statistical analyses. We created a participant self-report questionnaire to ascertain lifespan RSH and conducted a follow-up pilot study to assess the feasibility of asking participants to recall RSH details from menarche through menopause. Response options were "yes", "no", or "do not know". Nineteen of 40 participants (33–91 years, 100% non-ischemic etiology) returned the survey. Overall, all respondents recalled and reported details of their lifespan RSH. All reported at least one reproductive system event with known CVD associations.

Linking Method to Research and Practice: Collecting RSH data in CVD research is essential to revealing nuances in sex and gender differences in CVD outcomes. Better understanding the significant increased CVD risk conferred by certain RSH may impact clinician guidance on preventing or treating CVD among females.

Conclusion: Female-specific or sex difference outcomes in CVD research should incorporate RSH. We propose two RSH data collection approaches and data management guidance for statistical analysis.

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WOMEN’S HEALTH ACROSS THE LIFESPAN

Development of a Conceptual Model: Breast Cancer Screening Hesitancy in Oman

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Purpose: The conceptual model represents the concept of screening hesitancy in Oman and illustrates the relationship between the antecedents, attributes, and consequences as well as other important factors that are important in the process of deciding breast cancer screening in Oman.

Background: Breast cancer (BC) has a profound impact globally, affecting individuals physically and mentally while straining healthcare systems. In Oman, BC accounts for 32% of all female cancers, with a concerning 25% affecting women under 39 years old. Early BC detection is vital, as it can reduce mortality by 25-30% and improve treatment prospects. Breast self-examination (BSE) and mammograms are effective screening methods, but Oman faces issues with hesitancy and nonadherence. Studies reveal that anxiety about hospitals, fear of death, and strong faith in divine healing contribute to delayed screenings, resulting in a high number of BC cases diagnosed at advanced stages.

Method: Following Rodgers’s concept analysis, a conceptual model was developed to elucidate the concept of breast cancer screening hesitancy in Oman. Based on antecedents, attributes, and consequences, this model reveals factors influencing women’s decisions to undergo screening and the outcomes of their choices. Antecedents encompass breast cancer screening perception, health beliefs, knowledge, and socio-cultural, emotional, and cultural factors. These are informed by cited reasons from literature in Jordan, Saudi Arabia, Oman, and the United States. Decision-making and confidence are attributes of screening hesitancy, closely tied to causative factors. Extensive literature research, assisted by a librarian, supported the proposed antecedents within the model with appropriate referencing.

Result: The proposed antecedents, backed by global literature, highlight the need for further research on breast cancer screening hesitancy’s behavioral and societal impact. Monitoring Oman’s current breast cancer screening trends is crucial to identify changes warranting community outreach programs. Hesitancy in Oman is driven by misconceptions about breast cancer and a lack of screening awareness. Many Omani women fail to appreciate the importance of early screenings, even when symptoms manifest. A knowledge deficit, affecting 33% of Omani women’s understanding of BC symptoms and screening, fuels uncertainty and hampers decision-making. Fear is a significant factor, compounded by personal experiences with BC patients and pain concerns. Emotional barriers encompass anxiety, embarrassment during clinical examinations, and fears of cancer diagnosis. Cultural barriers, stemming from modesty, hinder screenings. These hesitations lead to late-stage diagnoses, increasing morbidity and mortality rates. Oman’s BC incidence doubled from 13.6 to 26.9 cases per 100,000 women between 1996 and 2015, emphasizing the urgency of addressing these factors for improved screening rates.

Conclusion: The proposed conceptual model of BCS in Oman serves as reference to understand Omani women decision about BCS, factors that influence that decision and the effects of not getting screened. Hopefully, an intervention would be tailored to reach out to this vulnerable population to early get screened and have better outcomes. Additionally, community-based interventions can be considered to address this issue.

Adapting an Integrative Group Medical Visit to Address a Gap in Menopause Care: MENOGAP

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Purpose: The purpose of this study is to describe the adaptations made to develop a multi-modal group medical visit intervention tailored for peri- and post-menopausal women.

Rationale: Vasomotor symptoms (VMS) affect 50-85% of women during perimenopause. This transitional phase commences with changes in menstruation patterns and concludes one year after the final menstrual period. The severity of symptomatology can be so pronounced that, when given the choice, 52% of surveyed women would opt for a lifespan shortened by 90 days rather than enduring their most distressing perimenopausal (PMP) symptoms for just 30 days. Beyond VMS, PMP women face multifaceted changes across three crucial health domains: biological (perceived stress and heart rate variability (HRV), behavioral (self-efficacy), and social (interference with interpersonal relationships). This triad of PMP health domains highlights the importance of the NIH's holistic Whole Person Health Initiative, emphasizing the interconnectedness of health across multiple domains. Despite this, current primary PMP interventions, mainly hormone therapies, predominantly target the biological domain, leaving the behavioral and social domains unattended. A promising adjunctive strategy for delivering comprehensive care to PMP women is the utilization of Integrative Medical Group Visits (IMGV). IMGV, proven effective for individuals dealing with chronic conditions, proactively addresses the biological, behavioral, and social dimensions of holistic health. IMGV integrates diverse health modalities, provides patient education, and offers medical care, all while being covered by health insurance. Our team has adapted an IMGV curriculum developed for chronic pain, aptly naming it MENOGAP.

Methods: Rigorous methodologies for adapting evidence-based interventions have evolved over time, with contemporary standards advocating the use of frameworks such as The Framework for Reporting Adaptations and Modifications-Enhanced (FRAME). With the assistance of a Community Advisory Board (CAB), using the FRAME model, we delineated the adaptations made to IMGV in the development of MENOGAP.

Assessment of Findings: To adapt MENOGAP, eight female CAB members and three female healthcare providers (2 physicians and 1 licensed acupuncturist) participated in ongoing meetings. Community members were highly educated and diverse in ethnicity and religion and had an average age of 51.9 years (range 45-65 years). Six out of eight community members were postmenopausal. None of them reported a history of a hysterectomy.

From these meetings with the CAB, we developed nine weekly sessions in-person sessions that were adapted from the IMGV model. Information was added and removed according to the CAB suggestions. Our findings were to remove the utilization of the IMGV website, poems, and health topic videos. MENOGAP incorporates mindfulness techniques, self-acupressure, and includes extensive additional information specific to menopause.

Conclusion: This study provides valuable insights into the adaptation of a multifaceted intervention that not only offers medical care in a group context but also imparts health education and evidence-based integrative health information to peri- and post-menopausal women. MENOGAP addresses the unmet needs of this population by encompassing the biological, behavioral, and social dimensions of health, aligning with the holistic approach advocated by the NIH's Whole Person Health Initiative.

ABSTRACTS OF POSTER PRESENTATIONS

Preparing School Nurses to Address Student Mental Health Needs

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Purpose/Aims: Evidence shows school nurses spend approximately 33% of their time caring for students with mental health (MH) concerns. However, school nurses consistently report feeling unprepared to address student MH needs. This DNP project aimed to evaluate the impact of an evidence-based, comprehensive MH training program on school nurse perceived preparedness to address student MH needs and school nurses' identification, referral, and communication practices.

Rationale/Background: Child and adolescent MH is a growing concern, with diagnoses such as anxiety, depression, and attention deficit hyperactivity disorder (ADHD), among other MH conditions impacting youth early in life. A staggering 49.5% of adolescents have been diagnosed with an MH condition, and 17.4 % of children ages 2-8 have been diagnosed with a behavioral, mental, or developmental disorder. There is a direct link between mental and physical health, demonstrating that youth who receive MH services will have a lower chance of long-term mental and physical health diagnoses. The aftermath of pandemic-era social isolation has left children and adolescents significantly more vulnerable, demonstrating an urgent need for school health providers to be equipped to support student MH. Still, school nurses report feeling unprepared to manage these needs due to absent or limited MH continuing education and have identified this as their number-one educational priority. A rapid review of the literature was conducted to examine the characteristics and impact of current, evidence-based MH training programs for school nurses working in pre-K-12 schools. This review revealed that online and in-person MH training can improve school nurse knowledge, confidence, and preparedness to address student MH needs and can positively impact student outcomes related to MH identification, referrals, management, and symptom reduction.

Approach and Methods: Using the Johns Hopkins Nursing Evidence-based Practice Model (JHNEBP Model) as the guiding framework for this project, one educational program included in the literature review was selected for implementation in an independent school nurse population in Southern California. The program selected aligned with the best practices and characteristics of effective MH training programs identified in the literature review. The three-module, web-based program has an accessible, self-paced design and comprehensive MH curriculum. Topics in the curriculum include therapeutic communication, crisis management, referrals, screening, diagnosis and treatment of MH conditions, relaxation techniques, and vignettes to demonstrate the application of techniques learned. This project utilized a pre-and post-intervention design to evaluate changes in school nurse perceived preparedness to address student MH needs and to analyze potential differences in nurse ability to identify, refer, and communicate with students and families about student MH. Participants were given six weeks to complete the intervention and both the pre and post-intervention surveys.

Assessment: Data collection is in progress, and analysis of results will be presented at the time of the conference.

ADOLESCENT HEALTH

Screening and Treatment of Chlamydia and Gonorrhea in Juvenile Corrections

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Purpose: This project aimed to investigate the prevalence of Chlamydia trachomatis (CT) and Neisseria gonorrhea (GC) among sexually active youth in Utah juvenile correctional facilities and assess the feasibility of providing timely treatment for positive cases before youth were released into the community.

Introduction: Adolescents and young adults aged 15-24 account for approximately 50% of new sexually transmitted infections (STIs) annually. CT is the most common bacterial STI in the United States. In State, where this program was conducted, 60% of CT cases occurred in individuals between the ages of 15 and 24 in 2020. Neisseria gonorrhea (GC) is the second most reported bacterial STI in the United States, and its incidence has increased over the past decade. Both CT and GC are pathogens of public health concern because of antibiotic resistance, rising community spread, and their effects when left untreated.

Background: A 2022 systematic review showed that adolescents in juvenile detention centers are at an even higher risk of STIs than the general population and that STI screening in carceral settings is cost-saving, feasible, and should be performed immediately upon intake as opt-out screening

Methods: From October 2021 to May 2023, a correctional RN offered all sexually active youth admitted to State juvenile justice facilities the opportunity to be screened for CT and GC via a urine sample. Data were collected from 12 correctional facilities, with the state classifying four as rural and eight as urban. Youth who screened positive were either treated by the nursing staff on-site or, if they had been released, were referred to their local Health Department for follow-up. Nurses used standing orders to treat positive test results within the facility. Limitations were an inability to offer universal CT/GC screening because of State law allowing only those who are concerned about infection to consent to STI screening, youth admitted under the influence of drugs or alcohol because of their inability to consent, and the release of youth before their results were known.

Results: A total of 557 urine samples were collected. The average age of participants was 15.87 years. Of these, 69.13% were male, 28.34% were female, and the remaining population identified as transgender or other gender identities. This screening program revealed CT positivity rates of 10.77%, GC positivity rates of 1.08%, and a co-infection rate of 0.90%. The combined positivity rate for CT and GC was 12.75%. Those identifying as female had an infection rate of 12.01%, and those identifying as male had a rate of 14.01%. There was no significant difference in the prevalence of STIs between females and males ($p = 0.5242$). Conclusions cannot be drawn for gender-diverse individuals because of insufficient sample sizes. Rural and urban youth showed similar rates of infection. The known treatment rate for CT/GC overall was 74.65%, with 67.61% treated in the facility and the remainder treated by the local health department.

Implications for Further Research: Future endeavors should focus on tracking positive cases post-release and identifying barriers to community-based treatment.

Sounding the Alarm Regarding ENDS Marketing: Nursing’s Call to Action

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Purpose: The purpose of this e-liquid label analysis is to identify themes and marketing strategies that tobacco companies may use to attract users, especially youth and young adults.

Background: ENDS use is increasing in popularity among youth and young adults. In 2022, approximately 2.55 million middle and high school students reported using ENDS. Among youth users, nearly 85% reported using flavored ENDS products, and that flavor was the reason to start and continue using ENDS. E-liquids are often packaged in brightly colored packages and may imitate familiar products to pique consumer interests.

ENDS are a classified tobacco product and are covered under the 1998 Master Settlement Agreement (MSA) that banned cartoons to market tobacco products in an effort to curb youth initiation. The FDA is addressing ENDS products with youth appealing features (food/candy, cartoons, and toys). Youth may also access ENDS advertisements on social media platforms.

While fewer adults report using ENDS (over 9.1 million in 2020), concerns exist regarding unknown health effects and the risk for dual use. Inhaled aerosols contain harmful chemicals, including heavy metals. Neurological, cardiovascular, and respiratory systems can be affected by ENDS use and long-term health effects are unknown.

Methods: E-liquids (n = 285) were purchased from tobacco specialty stores throughout North Dakota. Published literature was reviewed to develop a label analysis strategy. Researchers independently coded each sample for a variety of themes and youth appealing features, reviewed discrepancies to reach consensus, then independently reviewed all samples again with the final theme codes. Researchers reviewed results and confirmed consistency in the thematic coding process.

Assessment of Findings: Preliminary findings include the identification of 17 themes, with some themes more likely to be associated with colorful packages. About one-third of the samples contained a food product reference, about 25% samples resembled a familiar product, and just over 10% contained cartoon imagery. Few samples were coded as plain.

Conclusion/Implications: Only a few samples were coded as plain, which aligns with tobacco industry marketing tactics involving bright colors. Additionally, youth perceive plain packing as lame and uncool. Colorful packages with various themes may provide youth a way to express their personal identity. We suggest that young adult users may also find appeal via feelings of nostalgia with imitation products and may have perceptions of low risk when compared to combustible cigarettes.

Recommendations include replication of the thematic analysis with samples from various regions of the United States and consideration of focus groups to identify perceptions of product design. Understanding the history of tobacco marketing regulation is imperative to evaluate marketing tactics used by the tobacco industry to engage new ENDS users. Nurses are leaders in systems change and should advocate for comprehensive assessment and treatment for tobacco and nicotine product dependence. Early intervention is key to preventing initiation and encouraging cessation, regardless of age. As the nation’s largest healthcare profession, nurses can play an important role in the development of a comprehensive policy that bans youth appealing features in the marketing of ENDS and other emerging tobacco products.

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Adolescent Perspectives of Therapeutic Alliance in Telemental Health: Scoping Review

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Purpose: To conduct a scoping review, which examines research evidence on the development of therapeutic alliance in adolescents (ages 14-18) while using telehealth during mental health (telemental health) encounters.

Background: Thirty-seven percent of all high school students in the United States reported poor mental health during the pandemic, and 44% reported sadness and/or hopelessness in the past year. Access to services, including telehealth visits, may allow more adolescent patients to receive appropriate care. Therapeutic alliance is defined as a collaborative relationship with a strong affective bond and the ability to agree on treatment tasks and goals between patient and provider. Establishing therapeutic alliance is paramount in this age group as there can be additional barriers to building trust and an affective bond between patient and provider. Further, telehealth may facilitate access, but preliminary research demonstrates the challenges in providers' building therapeutic alliance during telehealth visits in the adolescent population.

Methods: Four electronic databases (CINAHL, Embase, PsycINFO, PubMed) were searched with the latest search in June 2023. Google Scholar and a grey literature search through ProQuest was conducted at the same time. Following Joanna Brigg's Scoping Review Methodology, the Preferred Reporting Items for Systematic Reviews and Metanalyses- Scoping Review guidelines (PRISMA-ScR) was used to report the findings. A medical librarian assisted with the search strategy using the keywords "distance counseling, "telemedicine," "telenursing" "internet-based intervention," "telehealth," "eHealth," "telemedicine," "telecounsel*," "teletherap*," "internet-based," "remote," "telephone," "phone," "video" AND "professional-patient relations," "working alliance," "therapeutic alliance" AND "psychiat*," "anxiety," "anxious," "depress," "OCD," "obsess*," "mental disorders," "mental health services." For inclusion, articles needed to examine therapeutic alliance, be comprised of mental health patients, use a telehealth modality (synchronous with audio and/or videoconferencing), and mean age of participants between 14- 18 years old. The search was limited to articles published in English; recency of publication and geographic location were not exclusion criteria. A total of 1,145 articles were obtained after duplications were discarded. Three reviewers, working in pairs, independently reviewed each citation against predetermined criteria. A total of 11 articles met the inclusion criteria and were used for data extraction.

Assessment of Findings: The 11 articles that met criteria were case reports, descriptive, qualitative, mixed methods, and a partially randomized patient preference pilot study. Three studies occurred before March 2020, when the SARS-CoV-2 (COVID-19) pandemic started, and the rest of the articles occurred during the pandemic when social distancing measures were encouraged or mandated. Five categories were created to synthesize the findings: "established relationship prior to telemental health," "appropriateness of diagnoses using telemental health," "role of the device," "need for therapeutic space and privacy" and "dropout rate in telemental health."

Conclusions: A resounding recommendation emerged in offering a hybrid approach. However, many barriers still exist in the complex, high-risk, and geographically challenged patient. Telemental health can bridge the divide between those who traditionally cannot access treatment, but providers must learn how to develop relationships virtually. Further research is needed to assess therapeutic alliance using telehealth between adolescents and clinicians in the post-pandemic era; particularly from the adolescents' perspective.

Help a Friend!: A High School Suicide Prevention Program

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Background: As of 2021, suicide was the second leading cause of death among adolescents in the United States. This impact is evident in high schools as approximately 20% of high school students report suicidal ideation and 9% report a previous suicide attempt.

Local Problem: California high school students spend 180 days in school, making it an ideal venue to recognize and intervene with mental health crises. However, schools in San Joaquin County do not have adequate resources to identify or treat their mental health needs. A San Joaquin County high school does not have a student-based suicide prevention program despite more peer referrals than staff referrals. With only one mental health counselor for 621 students, more resources are necessary to implement a student-based program. The purpose of the suicide prevention education is to fill this gap by creating a program to equip and prepare students to identify and respond to their peers in a potential crisis.

Methods: The Institutional Review Board approval was obtained to conduct this quasi-experimental quality improvement project. Pre- and post-surveys will be utilized to collect data. The Johns Hopkins Evidence-Based Practice model was used to create a suicide prevention education program for high school students. The HELP a friend! suicide prevention program will be conducted with approximately 200 ninth-grade students during their biology and art classes. The 45-minute lesson consists of decreasing stigma surrounding suicide, identifying risk factors and warning signs, and equipping students with response and referral strategies using the HELP acronym (**H**ow are you?, **E**mpathize, **L**ook for warning signs, **P**oint in the right direction). The goals of the educational session are to: (a) increase perception/attitudes, (b) increase student knowledge, and (c) increase referral behavior. Perception/attitudes and knowledge will be measured through the use of a pre-survey given at the beginning of the educational session compared to a post-survey given at a two-month follow-up. The Health Behavior Survey developed by a professor at the University of Connecticut Health Center will be used to collect quantitative data. Referral behavior will be measured by comparing data collected by the counselor during the two months before and after the educational session.

Interventions: Students who have parental consent will complete the pre-survey and participate in the educational session. The information will be presented primarily in the format of a PowerPoint presentation. Part one of the lesson utilizes a trivia-style game to address stigma and common misconceptions surrounding suicide. This will allow increased engagement and anonymous participation. The second part will focus on identifying risk factors and warning signs of suicide. The final part will focus on peer responses and referral strategies utilizing the HELP acronym. The lesson will wrap up with a reminder of mental health resources on campus.

Results: There are no results to report at this time. The data collection for the quality improvement project is in process.

Educational Intervention Impact for Adolescents with Congenital Heart Disease

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Objectives: This quality improvement project aims to deliver an educational intervention that addresses self-management topics related to healthcare transition, the transition from pediatric to adult healthcare services, to adolescents with congenital heart disease in a pediatric cardiology clinic preparing for the transition to adult healthcare.

Background: The challenges experienced transitioning from adolescence to adulthood are amplified in adolescents with chronic illnesses, as they strive to acquire independence in managing their medical care. Congenital heart disease (CHD), the most common congenital defect, is a growing population thanks to impressive medical advancements. Got Transition, the federally funded program for healthcare transition, outlines that healthcare transition preparation should begin at age 12 to 14 with the following Six Core Elements: transition policy, tracking/ monitoring, readiness, planning, transfer of care, and transfer completion.

Pediatric cardiology clinics often have capacity for a singular transition preparation appointment at age 18, related to insurance reimbursement constraints, which leaves education and reinforcement to be desired. It is well-known in the literature and at a Los Angeles children's hospital that after transfer to adult care, less than half of adolescents with CHD establish care with an adult primary or specialty provider within about ten years after leaving pediatric care. Care lapses predispose young adults to late recognition of cardiac complications and thus, delayed treatment. Delayed follow-up in this population points those seeking long-term solutions to the critical education given during the preparatory phase of healthcare transition. Literature outlines education for this population should be nurse-driven and focus on improving self-management by addressing critical transition topics.

Methodology: Utilizing a pre-and post-intervention design, this project will entail four phases. The outcomes of this project will be measured with one tool, the validated Transition Readiness Assessment Questionnaire (TRAQ) 5.0, a reliable measurement of adolescent's knowledge related to healthcare transition topics. The primary outcome is transition readiness. Secondary outcomes are managing medications, appointment keeping, tracking health issues, talking with providers, and managing daily activities. The adolescent will also be asked to name their heart condition, demonstrating basic disease knowledge.

In phase 1, a baseline, general population needs assessment was gathered with the TRAQ for any adolescents 12 years and older at the chosen clinic. Based on the data gathered, a targeted educational intervention was developed to address domains with the lowest knowledge base: appointment keeping, tracking health issues, managing medications, and disease knowledge. Phases 2, 3, and 4 will consist of the pre-survey, the TRAQ; delivery of the educational intervention by clinic nurses after a clinic appointment; and the post-survey, the TRAQ, seven days after the intervention to evaluate the individual impact of the educational intervention on the adolescent's transition readiness and associated outcomes.

Results and Conclusion: The care of a child patient into an adult should be a seamless process. Using the transitional tools to provide care for these patients as they enter adulthood are the steps to maintaining consistent care for them and ensuring better healthcare outcomes. This DNP project is ongoing. The final results will be presented at the conference.

Living after an Opioid Overdose Reversal

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Purposes/Aims: The purpose of this study is to create a grounded theory. The research question is, "What is the experience of living through an opioid overdose reversal?"

Rationale/Conceptual Basis/Background: Almost 700,000 Americans 12 years and older were living with heroin use disorder in 2020; they are at increased risk for fatal and nonfatal overdoses. Dying from an overdose is of great national and local concern. Heroin was involved in about 152,000 fatal overdoses from 1999-2021. The number of fatal overdoses has decreased in the past few years, and this is likely due to several interventions such as, appropriately prescribing opioids for pain, preventing and treating opioid use disorder, and using naloxone to reverse opioid overdoses. The experiences of people who have survived an overdose have been studied, as has the impact of an overdose on continued use of substances. Many studies do not include a theory, nor is the need for the development of theory articulated by the authors. The absence of theory limits connecting practice and research.

Methods: Dimensional analysis is a methodology and process for analyzing data. Epistemologically and operationally, it varies from grounded theory and provides structure for analysis with the goal of creating a theory. Phenomenal variation sampling was undertaken and participants were recruited by staff at the Guildford County Solution to the Opioid Problem (GCSTOP) program. The inclusion criteria were 18 years or older and able to speak and understand English. After providing verbal informed consent, individual, audio-recorded telephone interviews were conducted. Audio recordings were professionally transcribed. Data are currently being analyzed using dimensional analysis which includes the following operations: dimensionalizing and designation, accumulating a critical mass of dimensions, developing an explanatory matrix, and articulating the theory. Theoretical memo writing is done in tandem with these.

Assessment of Findings/Outcomes Achieved: Eleven participants were interviewed between June 2020 and November 2021. Interviews lasted 22 to 66 minutes. Data consisted of 144 transcribed pages, or 61,244 words. Participants' mean age was 36 years (range = 24-46 years). The number of lifetime overdoses ranged from 1 to approximately 40. Data analysis is in progress. Specifically, the operations of dimensionalizing and designation are complete. These have included several steps, such as summarizing each interview, applying labels to all textual data, and creating preliminary dimensions and their associated properties using the labels. These were then arranged alphabetically by participant to appreciate similarities. Only dimensions and properties about living through an opioid overdose were considered for further analysis. Currently assembling a critical mass of dimensions is underway. The next steps will be to create an explanatory matrix and theory.

Conclusions/Implications: It anticipated that the stud outcome will be a clinically relevant theory to guide nurses and other health and social service providers to serve persons who have survived and are now living after an opioid overdose.

Funding: New Faculty Internal Research Award, University of North Carolina at Greensboro.

Adult-Child Caregiver Health and Wellbeing by Proximity to the Care Recipient

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Purpose: This study aims (1) to characterize adult-child caregivers of older adults based on proximity to the care recipient, and (2) to examine the association of proximity with caregiver health and wellbeing, while controlling for demographic factors.

Background: In the United States, over 42 million people are caregivers to a family member or friend age 50 year or older with a health problem or disability, 57% of whom are adult children caring for their parents or parents-in-law. While caregiving confers benefits to both the caregiver and care recipient, researchers recognize the effects of caregiving on the physical, psychological, and economic health of the caregivers themselves, and consider caregivers as a priority public health population. Intergenerational proximity – the distance between parent(s) and their adult-child residences – varies over the life course and is influenced by sociodemographic factors. Although adult-children serve as caregivers even while living far away, whether and how proximity impacts their health and wellbeing is understudied.

Methods: We will use 2021 National Health and Aging Trends Study and National Study of Caregiving (NSOC) data. The analytic sample includes adult-child caregivers to a representative sample of community or residential care dwelling Medicare beneficiaries age 71 years and older. Proximity between the caregiver and care recipient residences is defined by caregiver-reported travel time, categorized into co-residence, living 1-20 minutes, 21-59 minutes, and 1 hour away. By proximity, we will compare caregiver demographics and caregiving characteristics including hours, duration, tasks, and aspects of caregiving. In addition, we will examine caregiver health and wellbeing, including self-rated general health, mental health (PHQ-4) and positive/negative affect (feeling cheerful, upset, etc.) by proximity. We will report weighted proportions, means, and standard deviations (SD), compute ANOVA and Chi-square tests, and perform multiple regressions to examine differences by proximity ($\alpha \leq 0.05$). All analyses will be conducted in Stata/SE 17.0 using survey commands with subpopulation statements to restrict the analysis to the analytic sample.

Findings: Data analysis is in-progress. The analytic sample consists of 1,209 unique care recipients and 938 unique NSOC eligible caregivers. Among adult-child caregivers, 26.3% (weighted) co-reside with the care recipient, 47.4% live 1-20 minutes away, 13.1% 21-59 minutes away, and 13.3% 1 hour away. Overall, mean caregiver age is 58 years (SD=8.5), and 63% are female. Statistically different demographics by proximity include: college educated and married caregivers tend to live further away; mean income is 2x or more for caregivers who travel any amount vs. those who co-reside; and there is an inverse relationship between employment and co-residence. Results of additional analysis will be available by April 2024.

Conclusions/Implications: Distance-caregivers are generally an understudied sub-population of caregivers. Planned bivariate and multiple regression analyses controlling for demographic factors will be important to tease out the impact of proximity on caregiver health and wellbeing. The findings from this study will enhance our understanding of the health and wellbeing of caregivers by proximity, and inform policy, community services, and clinical practice to support distance-caregivers.

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Modified Depression Treatment Among African Americans: A Systematic Review

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Purpose/Aim: There is a growing need for mental health care services. Nurses are consistently caring for patients who struggle with mental health issues, especially depression. This systematic review of the literature examines the effectiveness of using modified evidence-based psychotherapy and faith-based resources in improving depression among older African-American adults over the use of conventional pharmacological intervention.

Background: It has been established that due to several factors African American adults and older adults in the United States respond poorly to pharmacologic intervention in treating depression. The study will help to provide evidence and raise awareness on how to better serve the African-American population with depression.

Methods: 21 studies that recommended utilizing psychotherapy intervention to improve depression in this population were reviewed to better understand the need for using modified psychotherapy and faith-based for African American adults and older adults.

Summary of Results: All the reviewed articles concluded that modified psychotherapy is a better intervention for African-American adults and older adults than pharmacological intervention. Given the composition of African Americans used for the studies reviewed, more clinical research is needed to accommodate the diverse cultures among African Americans.

Conclusions: This study presents evidence on the effectiveness of using psychotherapy and faith-based resources in improving depression among African American adults and older adults instead of using pharmacological intervention for which this population demonstrated extremely poor response. Nurses must be aware of the growing mental health care needs of this population of patients so they can properly advocate for or provide proper resources for these patients.

Associated Risk Factors for Not Completing Latent Tuberculosis Infection Treatment

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Purposes/Aims: The purpose of this study is to identify factors associated with failing to complete Latent Tuberculosis Infection Treatment (LTBI) treatment among a racially/ethnically diverse sample living in a Southwestern metropolis.

Rationale/Background: At least one-fourth of the world population has Latent Tuberculosis Infection (LTBI), 5-10% of whom will develop active tuberculosis (TB). The World Health Organization has a goal of TB eradication. However, the successful completion of treatment for LTBI is eluding their plan. The current completion rate of LTBI treatment in the United States ranges from 50-65%, down from 82.5% in 1993. These figures indicate despite faster, more efficient treatments, and decreased cases, there is a disconnect between practices and patient outcomes. Notably, the majority of LTBI research is based on migrant and incarcerated populations, limited information exists on risk factors for failing to complete therapy (FTC) among the general population; data is needed to capture a more heterogeneous population.

Conceptual Framework: This study is guided by the seminal work of Sr. Callista Roy with concepts of Roy's Adaption Theory linked to selected variables. While under treatment, one variable could undo the patient's perception of health balance causing adaptive shifts to achieve health fulfillment.

Methods: A descriptive, correlational, cross-sectional design. Data will be extracted from the TB database of a county public health department located in the southwestern region of the United States. Descriptive statistics will be used to characterize the sample and clinical variables. Chi-square tests and correlations will be conducted to identify statistically significant relationships. Logistic regression will be conducted to identify factors that increase the odds for FTC.

Results: Pending

Implications: LTBI treatment is a rigorous, compliance-based medication regimen. Missing treatment puts patients at risk for requiring treatment to be restarted and for developing drug resistance. Study outcomes may be utilized to reduce the current trend of LTBI medication adherence failure and possible drug resistance by identifying risk factors from failed LTBI treatments. Nursing implications include reducing TB exposure risk and guiding policy development to provide concise, escalating steps for factors identified with association with failed LTBI adherence. Identifying significant risks for LTBI adherence failure will provide insight for conditions requiring lengthy medication treatment.

Improving Preoperative Communication from a Long-Term Care Facility

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Purpose/Aim: This Doctor of Nursing quality improvement project aims to implement a communication toolkit to increase preoperative compliance and assessment, decrease case cancellations, and improve timely access to dental care.

Rationale/Background: Long-term care residents often have complex dental health needs that require general anesthesia to address these needs. Properly preparing for general anesthesia requires careful care coordination between the long-term care facility and the dental surgical center. Poor communication between the long-term care facility and the dental surgical center leads to poor care coordination, frequent case cancelation, and delayed access to dental care. Case cancellations are costly, cause patient anxiety, and are mainly preventable with appropriate preoperative assessment, preparation, and communication.

Approach/Methods: The Iowa Model guides this quality improvement project, leading to evidence-based decision-making and practice change. The culminating evidence supports developing a communication toolkit to decrease preventable case cancellations and increase overall care coordination and workflow processes. Interventions include identifying reasons for case cancelations and communication breakdown, developing tailored strategies addressing communication breakdown, utilizing a standardized preoperative order set and a formal handoff communication tool, using electronic data exchange, and implementing a nurse-led preoperative assessment.

Assessment of Findings/Outcomes Achieved: With one surgical center servicing several long-term care facilities in the Salt Lake City, Utah, area, the Iowa model guides this project to pilot the toolkit first in one long-term care facility before implementing it in other facilities. Communication breakdowns have been identified and development of the toolkit is currently taking place. Once the toolkit is developed and implemented, the project coordinator will assess for usability, feasibility, and satisfaction. Depending on the feedback received, there will be a continual process to modify the toolkit as needed. Any process changes are done here before implementing them on a larger scale. The project coordinator will track case cancellation reasons and rates pre- and post-intervention. Staff will be surveyed for usability, feasibility, and satisfaction. The quality improvement project hopes that case cancellations will decrease and staff satisfaction in workflow processes and perception of care coordination will increase.

Conclusions/Next Steps: If this toolkit is deemed usable, feasible, and sustainable, the next step is to identify a second long-term care facility to trial the toolkit. The goal is implementation in all long-term care facilities that send patients to the surgical center for dental procedures with continual monitoring and analysis of processes and outcomes. Implementation in all facilities will increase long-term care residents’ access to needed dental procedures and care. This project will also demonstrate successful quality improvement with positive results, encouraging practicing nurses to ask questions and take action to improve the quality of care they deliver through evidence-based practice change.

How to Optimize the Treatments of Venous Leg Ulcers? A Mixed-Methods Systematic Review

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Aims: To capture the quantitative and qualitative best evidence of enhancing adherence to treatments of venous leg ulcers (VLUs).

Background: VLUs open lesions at the gaiter area between the knee and ankle, are long-standing, serious conditions resulting from chronic venous insufficiency. Patients experience physical, psychosocial and financial impacts, resulting in a decrease in their quality of life. The key recommendations and recommended guidelines for treatment suggest promoting moist wound healing, adherence to compression therapy and progressive resistance exercise. While these treatments are effective in mitigating complications and preventing disease recurrence, numerous studies have reported high rates of non-adherence to them. The reasons for non-adherence are multifaceted, and effective interventions to address this issue have yet to be clearly defined.

Methods: A mixed-methods systematic review with a convergent segregated approach was used. PubMed, CINAHL, Ovid MEDLINE, Cochrane Library and Scopus were explored to identify articles published between January 2000 and December 2020. The quantitative review examined interventions designed to promote patients' adherence to treatments of VLUs, while the qualitative review explored patients' experiences with treatments at the outpatient clinic.

Results: Three randomized controlled trials and eight qualitative studies meeting all the inclusion criteria were included in this review. The quantitative findings indicate that the interventions including comprehensive patient education and self-management support can promote patients' adherence to the treatments and positively affect wound healing. According to the qualitative review, patients' treatment experiences varied, and patients needed improvement in the instructions and the communication and relationship with healthcare providers, as well as support.

Conclusion: Several strategies are recommended to promote patients' adherence to treatments. Comprehensive patient education or personal counselling sessions are the principal strategy to create a healthier learning environment with effective communication. Self-management support should be provided to achieve long-term self-care. Supplying educational materials could motivate patients to adhere to treatments. Simultaneously, patients' trust should be established by creating therapeutic relationships and providing professional, holistic care and consistent treatments. More rigorous research on adherence-enhancing strategies should be conducted to assess adherence and variations among different compression types.

When Humor Leads to Harm: A Concept Analysis of Memes as Health Communication

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Purpose and Background: Since the COVID-19 pandemic, online health-related misinformation has increased in prevalence and sophistication, resulting in harm. This harm includes vaccination hesitancy, rejection of public health initiatives, utilization of unproven or unsafe treatments, and aggression, violence, and harassment toward public health figures. This concept analysis focused on “internet-memes" related to health communication and understanding how they communicate a health message, using COVID-19 as a case example. The growth of internet-memes during COVID-19 provided an example of the hazards they can pose in spreading health misinformation, racism and bigotry, social violence, and political and social polarization.

Description/Definition of Concepts: A meme combines humorous imagery, video, or words through textual and subtextual messaging. We utilized Walker & Avant’s (2019) concept analysis framework. Our analysis reviewed several academic search engines using the inclusion criteria of “meme AND health communication,” limiting results to the last 10 years, English language, and geographic areas. In the 67 articles selected for review, we identified eight common themes associated with internet-memes: virality/evolution, iteration, jokes/humor, multimedia use, social media/digital items, subtext/subculture, community in/out grouping, and influences on social behavior. We synthesized these themes into three key defining attributes: 1) “Memes evolve and spread in a viral-like nature. They are iterative, appearing, disappearing, reinventing, and reappearing, primarily propagating across social media”, 2) “Memes are culturally relevant, informed by, and informing, larger culture. They also create subcultural in/outgroups who understand the subtext of the media used”, and 3) “Memes have a broad appeal through humor.”

Logic Linking to Research Problem: Our analysis revealed that memes are digital content units that are iterative, culturally relevant, include subtext, appeal to specific communities, and utilize humor. The most common attribute associated with memes are that they evolve and spread in an almost viral-like nature. They are a form of social/media communication created by the communities they target; thus, they can build and reinforce community traits and influence beliefs.

Nearly all meme definitions in this review included humor as a key element. This humor may be self-deprecating, political, mocking politicians or positions, or humor associated with subtext or in/out-grouping, such as an inside joke at work. Humor allows for increased construction, or reinforcement, of community in-grouping (i.e., parody or satire) and serves as a tool of dissidence against real or perceived authority, such as vaccinations promoted by the CDC.

Examining memes pertaining to health communication affords nurses, educators, and practitioners an understanding of how memes impact health communication and subsequent health behaviors.

Conclusion: This concept analysis provided an interpretation of meme characteristics and how they are used in health communication and showed that they are informed by real-world case examples such as COVID-19. Research is needed to develop strategies for using memes effectively in building health literacy while responding to the risks of misinformation, such as anti-vaccination propaganda. Nursing research should identify and counter harmful internet-memes and develop guidelines for creating or collecting accurate and informative memes for health education, health promotion, and public health outreach.

Providers’ Knowledge of Prescribing Long Acting Reversible Contraceptives

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Purpose: The purpose of this quality improvement project is to increase primary care providers’ (PCPs) knowledge and self-efficacy in prescribing long acting reversible contraceptives (LARC) to women of childbearing age.

Background: Reducing unintended pregnancy remains of great precedence to national public health. The combined oral contraceptive pill remains the most commonly utilized contraceptive method, despite its high user error and poor reliability. Long acting reversible contraceptive methods, including intrauterine devices (IUDs) and the implant, are favored for their greater effectiveness and decreased user error. The solution to reducing risk of unintended pregnancy is increasing provider awareness and patient uptake of long acting reversible contraceptive methods. Increasing provider knowledge and identifying barriers to LARCs are pivotal to increasing adoption of this evidence supported birth control method.

Methods: The Theory of Planned Behavior (TBP) is commonly applied as a predictive theory for determining individual behavior change. To predict providers’ prescriptive practices of LARCs to women of childbearing age, evaluators must assess their providers’ knowledge and barriers to prescribing LARCs to this population. These factors work interdependently to shape providers’ overall intention to prescribe LARCs, therefore influencing the likeliness with which they will perform the behavior. After assessing stakeholders at clinical site buy-in, the NP student project manager will create a 30-minute LARC educational intervention to be delivered in person at a time deemed convenient to the PCPs. Immediately following the educational intervention a post/pre survey assessing PCP knowledge and intention to change practice will be administered. Evaluation of provider’s knowledge, identified barriers and intent to adopt LARC will be assessed using survey style questions and Likert scales.

Results: This quality improvement project and data collection are planned for the Spring of 2024.

BEHAVIORAL CHANGE

American Indian Cancer-Related Pain Management in a Changing Social Climate

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Aims: This paper reports on the perception of pain, pain management associated with cancer diagnoses, pain medication adherence, and response to a pain intervention among American Indian cancer survivors.
Background: Cancer-related pain is a significant concern among most cancer patients and survivors. The social climate in the US has changed over the decades from widespread opiate use for many maladies (from cocaine for histrionics to other opiates for cancer), to be a more controlled and managed medication delivery designed to limit addiction. Currently, medication delivery has evolved into a "compassionate care" policy allowing for unlimited pain medication for terminal cancer patients. Unfortunately, some cancer survivors reject prescribed medication treatment with no or limited follow-up resulting in inadequate cancer pain control. There is a dearth of literature, as well as understanding, related to culture-bound meanings of cancer and related symptom management among American Indians. Aeptance of opiates and non-pharmaceutical treatment for pain management varies across groups, and traditional Indian medicine, behaviors, beliefs, and culture-bound responses to pain need to be considered.
Methods: A sample of 232 adult American Indians diagnosed with cancer were recruited from eight Southwest reservation and urban sites to form a randomized clinical trial (RCT) that tested a cancer symptom management intervention. The intervention tested (via a random pre- and posttest) a series of educational Talking Circles reinforced with a Tool Kit designed for cancer symptom management. Thirteen focus groups of 10-15 community members per group were held prior to the intervention to gather information on communication preference, health-seaking behaviors, and perceptions of and barriers to cancer symptom management (pain, depression, fatigue, functionality). Focus group findings informed the RCT in areas of culture-bound behaviors, perceptions, and barriers to health care services.
Assessment of Findings: Reasons for pain management non-adherence were identified in four categories: (1) Fear of medication addiction, (2) Pain is meant to be, (3) One must bear the pain, and (4) Cultural constructs of pain.
Implications for Future Research: Understanding the cultural constructs of pain in an indigenous population calls for in-depth research targeting specific tribal regions or tribal groups. Variation among the 576 Federally Recognized tribes exists and findings cannot be readily generalized to all American Indians. The changing social climate that provides for medically approved pain treatment overlooks the values and beliefs of Indigenous peoples. Culturally appropriate education and interventions can increase cancer-related pain management.

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BEHAVIORAL CHANGE

Preconception Preparation: Qualitative Results from a Participatory Film Project

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Aims: Participatory film use to facilitate discussions in Central African immigrant/refugees resettled in Utah about their knowledge and values regarding preconception health and preconception care.
Background: Preconception care is health care designed to optimize health *prior* to pregnancy and promote healthy pregnancies by decreasing maternal morbidity, neonatal mortality, incidence of stillbirth, preterm birth, and low-birthweight babies. The US' infant and maternal mortality rates are higher than those of most other high-income countries. These rates are particularly concerning for women of color. The promotion of healthy preconception behaviors and care in communities of color may help address these disparities.
Methods: Our team developed a film about a Central African refugee couple attending a preconception care visit. The film was developed in collaboration with a community advisory board comprised of university and community collaborators, including members of the Central African immigrant/refugee community. Community collaborators were from an organization founded to support Central African immigrants/refugees living in Utah. University collaborators included faculty with expertise in community-engaged theater, the African diaspora, and diversity and equity. In the film, a nurse midwife discusses preconception practices such as prenatal vitamins, healthy diet, physical activity, and avoiding stress with a couple (played by two Central African community members). Community leaders selected a convenient location for the film's screening. Prior to the screening, consent and demographic data was collected using surveys (interpreters were available). Qualitative data was collected in interpreter-led focus groups following the screening. The focus group-recorded transcripts were translated from Kirundi to English with gender designations. Inductive coding captured novel insights shared by participants. Codes were then organized into categories and themes.
Assessment: In total 6 male and 16 female Central African immigrants/refugees participated. Qualitative analysis of the participants' discussion produced three overarching themes: preparation, planning, and the role of the partner. The preparation discussion focused on the importance of health care and healthy behaviors *during* pregnancy rather than preconception. Participants described how to be healthy during pregnancy with only a few mentions of preconception health. Planning was discussed within the context of pregnancy spacing. Participants stated that their community does not use pregnancy-spacing methods but some emphasized the importance of it. Lastly, participants seemed to be impacted by the husband accompanying the wife to a preconception care visit in the film. This initiated conversation about the role of a husband in the health of the pregnancy including reducing stress and working on the health of their parenting relationship. Overall, the film was well received, and many participants described it as a "helpful" resource that could continue to be useful in the future.
Conclusions: Promotion of healthy preconception behaviors and preconception care is an essential step in improving both birth outcomes and the general health of women. Immigrants/refugees are an underserved population that could benefit from education about and participation in preconception care. Healthcare providers and educators can be more effective by considering the cultural beliefs and knowledge of African immigrants/refugees when discussing preconception care and must also include strategies to overcome language and communication barriers.

BEHAVIORAL CHANGE

Stigmatization of Persons with Opioid Use Disorder: DNP Quality Improvement Project

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Background: Opioid use disorder (OUD) and opioid overdoses significantly increased during the COVID-19, and in the 12 months ending in April 2021, over 100,000 drug overdose deaths occurred in the United States, an increase of 28.5% from the over 78,000 deaths during the same period the year before.

Local Problem: Stigma marginalizes this population and has presented a significant gap in care. In a Sacramento County, CA community hospital, the author has witnessed the use of the terms like “addict” or “junkie,” which are commonly used terms to describe persons with OUD. firsthand by providers and department staff in the emergency department (ED). These terms further marginalize these patients who might avoid seeking care. Stigma, whether perceived or institutional, can devastate persons with OUD.

Purpose

Aim Statement: This quality improvement project is focused on persons with OUD in Sacramento County emergency rooms: By March 31, 2024, following the implementation of emergency department provider training, we aim to increase the self-reported awareness and intention of providers to utilize person-centered, non-stigmatizing language by 15%. This target will be evaluated using a comparative analysis of pre- and post-training tests that measure awareness and the intention to adopt person-centered language, ensuring a shift towards a more compassionate and stigma-free care environment for individuals with OUDs.

Methods

Context: The context of this project is essential to understand how various factors may influence its success. The hospital is in Carmichael, a suburban area in Sacramento County, CA, and is close to a diverse mix of residential areas. This location allows the hospital to serve a wide catchment area, drawing patients from nearby neighborhoods and surrounding areas for a diverse patient population. This medium-sized hospital has approximately 300 beds and offers various medical services.

Proposed Interventions: The Stigma Reduction Training program will include the following components: perspective taking by a person with lived experience to consider their perspective and reduce stigma, thus improving patient outcomes; education on the neurobiology of addiction to help develop an understanding of substance use disorder (SUD) and how they are perceived; and finally, best practices in treating/managing OUD to provide the standard of care for persons with OUD.

Proposed Outcome Measures: Outcome measures identified will include provider attitudes, willingness to help OUD patients, pre- and post-survey testing utilizing the Opening Minds Provider Attitudes Towards Opioid Use (OM-PATOS), and provider self-report of non-stigmatizing language after the proposed stigma training program.

Results: The project was not completed at the time of this submission.

Conclusions: The project was not completed at the time of this submission.

BEHAVIORAL CHANGE

Characteristics of Patients with Heart Failure with and without Caregivers

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Purpose/Aims: To describe characteristics of hospitalized patients with heart failure (HF) with and without caregivers and the Self Care of Heart Failure Index (SCHFI) questionnaire.

Background: Incidence of HF is approaching almost 1 per 100 persons in older adults. HF contributes unplanned adverse events such as rehospitalizations that cause financial, social, and caregiver burden. Since HF is complex, HF management after hospital discharge requires a combination of different strategies including daily monitoring of low sodium intake, medications and weight monitoring as well as symptom management. Caregivers of HF patients need to be involved day-to-day HF care because HF is a chronic condition with slow progression of symptoms and requires daily coordination of their loved one's HF management. Although evidence shows that there is an association between a lack of caregiver's support and increased rehospitalizations in patients with HF, it is unclear how patients with HF with and without caregivers are different.

Methods: Enrollment characteristics were assessed on 58 pilot participants for the randomized controlled study entitled "Symptom Care at Home-Heart Failure," while they were hospitalized. Descriptive statics were conducted to describe demographics and the SCHFI among hospitalized patients with HF. The current SCHFI v7.2version consists of three domains with 29 items: Self-Care Maintenance, Symptom Perception, and Self-Care Management. Behavior measures on a scale of 1 (never) to 5 (always). In symptom perception, 9 items related to frequency of behaviors on a scale of 1-5 and 2 items on how quickly symptoms were recognized and identified as HF-related with scale of "not applicable," no symptoms, or 0 (did not recognize symptom) to 5 (very quickly). In self-care management, how likely the respondent would try behaviors commonly used to control symptoms on a scale of 1 (not likely) to 5 (very likely).

Results: It was found that with a total of 58 participants, 30 had unpaid caregivers while 28 did not. 82.8% of the participants were white and 41 were male. Based on a self-assessment, it is shown that those with caregivers are more likely to eat a low-salt diet, see their healthcare providers, take their medications, and ask their healthcare provider about their medications. Those with caregivers were more likely to check daily symptoms (33.3% vs 25%) more frequently checking shortness of breath with activity (60^ vs 28.6%) and more likely to check ankle welling (60% vs 28.6%) compared to those without caregivers. In terms of the SCHFI, those with caregivers had more confident in taking medications (53.3% vs 32.1%), asking a family member or friend for advice (33.3% vs 14,3%), monitoring condition (50% vs 35.7%) and in recognizing physical changes (50% vs 28.6%) compared to those without caregivers.

Conclusions/Implications for Future Undertakings: Patients report better adherence to HF self-care behaviors if they have a caregiver than those who do not. Future study warrants to develop support system to patients who do not have a caregiver.

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A Systematic Review of Family-Centered Care Interventions for Hospitalized Children

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Purpose/Aim: The purpose of this systematic review was to synthesize the global literature published in the past five years about family-centered care (FCC) interventions for hospitalized pediatric patients that aimed to improve patient or family experiences or outcomes.

Background: Family-centered care (FCC) is an approach to healthcare that supports the patients and family members as partners with the healthcare team and honors the culture, wisdom, and expertise of all members of the team. The core concepts of FCC are dignity and respect; information sharing; negotiation, participation, and collaboration. The evidence base of FCC interventions in neonatal intensive care units (NICUs) is abundant, but less is known about FCC interventions in other pediatric hospital settings.

Methods: Data sources: We conducted a systematic review of the literature using PRISMA guidelines. Five data sources including PubMed, EMBASE, Web of Science, and CINAHL Plus, and EMBASE were searched. Inclusion criteria were qualitative, quantitative, and mixed methods research articles published from 2017 to 2023 in peer-reviewed journals available in English. We included studies with children ages 0-18 in inpatient settings that evaluated FCC interventions that promote core concepts of FCC and measured outcomes of the patient or family. We excluded studies set in ambulatory care or community care settings, studies that did not describe or evaluate an FCC model, approach, or intervention, and literature reviews and commentaries. Studies that only evaluated staff outcomes or health service outcomes were excluded.

Study selection: Each article was reviewed by two of three independent reviewers and a third reviewer when a consensus discussion was needed. The reviewers reached agreement on 1,441 titles/abstracts, of which 265 full-text articles were assessed for eligibility. Eighty articles were selected for inclusion, most of which reported on FCC research studies conducted in the NICU setting. A decision was made by the reviewers to divide the systematic review into two separate analyses. This analysis focuses on fifteen articles about FCC interventions for pediatric patients and their families that were conducted in any pediatric hospital setting excluding the NICU.

Data extraction: Two independent reviewers extracted data from each article and reached consensus on the data extraction and the risk of bias evaluation. The Mixed Methods Assessment Tool was used for each article to assess for risk of bias.

Analysis and Findings: A meta-analysis was not possible due to heterogeneity of interventions and outcome measures. A narrative analysis (in progress) will report on the findings of all studies, organized by core concepts of FCC.

Significance: The values of the nursing profession are accordant with the FCC core concepts, so nurses in pediatric hospital settings are well suited to provide FCC along with the healthcare team. Findings of this systematic review will contribute to nurses' understanding of the state of the science of FCC interventions for pediatric patients and their families. The synthesis will identify strengths in the existing literature and identify gaps that remain in the research base and will guide future FCC intervention development and measurement, and evaluation.

CHILD HEALTH / ILLNESS

A Tale of Two Preterms - Optimizing Feeding Practices: A Case Study

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Purposes: The purposes of this case study of an early term (ET) and late preterm (LPT) infant were to view the trajectory of outcomes according to the feeding practices that were observed during the first two weeks and how they correlated with weight loss/weight gain, hyperbilirubinemia, near readmission, and phototherapy. The feeding practices observed were breastfeeding, pumping and refeeding expressed breast milk, supplementation with pasteurized human breastmilk and or formula, and tracking precise volumes compared to not tracking. The role of family support to maintain triple feedings after discharge was also observed.

Rationale/Conceptual Basis/Background: ET and LPT infants face unique challenges in feeding due to their gestational age. Inefficient milk transfer and inadequate milk supply can lead to weight loss, hyperbilirubinemia, and potential readmission.

This case study aimed to evaluate the impact of various feeding practices on outcomes in an ET and LPT infant during the first two weeks of life, specifically regarding weight loss/gain, hyperbilirubinemia, near readmission, and phototherapy. The study also explored the role of family and provider support (Social-Ecological Model) in maintaining triple feedings after discharge.

Methods: An observational case study was conducted with two newborns, one LPT (born at 36 6/7) and the other an ET (37 weeks by 1 hour 15 minutes). Mothers provided consent and data from medical records, doctor’s visits, and self-documented feeding logs. Institutional Review Board (IRB) guidelines of the University of Utah deemed this study exempt from IRB review.

Assessment of Findings:

- The LPT mother **p**roactively use breast massage with hand expression before breastfeeding or initiating **p**umping sessions, combined with frequency (10 times a day) which helped to establish and maintain an adequate milk supply for her sleepy/low energy LPT.
- **P**asteurized human milk on day two facilitated successful exclusive breastmilk fed LPT.
- Accurate tracking of feedings and pumped volumes, along with power pumping, aided in milk supply establishment and maintenance.
- Multigravida mothers who never had an ET/LPT infant may need extra support in managing early term/late preterm feeding behaviors to prevent excessive weight loss, hyperbilirubinemia, and possibly readmission.
- Triple feedings (breastfeeding, pumping, refeeding) are challenging but achievable with family support.
- Early discharge may impede vital education and assessments.
- This “3-P” plan of being **p**roactive, **p**umping, and using **p**asteurized human milk (on day two) was successful until the LPT was able to sustain breastfeeding sessions on their own and neared their term gestational age.
- The ET infant who did not have tracked feedings, nor consistent proactive pumping and breast massage, had a 10% weight loss and required home phototherapy.

Conclusions/Implications: This case study may serve as a pilot for optimizing feeding practices for early and late preterm infants and will inform a future dissertation in progress. Emphasizing proactive measures during the critical two-week period may reduce readmission rates. Education on feedings for early term/late preterm infants is crucial, as appearances can be deceiving due to their gestational age and immature sucking reflexes in establishing and maintaining a milk supply to avoid the cycle of outcomes associated with inadequate milk intake.

Continuity of Care in Children with Chronic Condition: A Concept Analysis

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Aims: This study aims to utilize concept analysis to better understand the concept of Continuity of care (CoC) in children with chronic conditions and to identify the concept's attributes, antecedents, and consequences.

Background: CoC has been the core principle of primary care and general practice that reduces the probability of children developing serious illnesses and frequently results in better outcomes for people with chronic conditions. Although the concept of CoC has been discussed numerous times, it overlaps with other concepts, such as patient-centered care and care coordination, and its definition has not been clearly defined. Moreover, many studies focus on CoC in the adult and elderly population, but few focus on CoC in children with chronic conditions who have unique characteristics and needs different from other populations.

Definition: CoC in children with chronic conditions is care over a period of time that is high-quality, accessible to patients, and managed by a collaborative care team partnering with the child and parent through the various stages of medical care. This concept emphasizes the children in care decision-making and supports them in working with the care team.

Method: Rodger's evolutionary approach was employed to guide the concept analysis, using an inductive process to explore a concept through its common use and define its characteristics. The concepts and keywords: "continuity of care," "continuity of patient care," "child," "adolescent," "infant," "children," "teenage," "youth," "chronic disease," "chronic illness," and "chronic condition" were searched in international databases, including PubMed, Web of Science, CINAHL, and Google Scholar, without a time limit until December 2023. The full text of the selected articles was reviewed. Based on the data, a detailed definition was formed, considering attributes, antecedents, and consequences. Exemplars and further concept development were also identified.

Results: The antecedents of the concept were children with chronic conditions and healthcare access. The attributes of CoC in children with chronic conditions are defined as information, patient-provider relationship, and care consistency. The consequences relate to the healthcare utilization and quality of life for the child and parent.

Conclusion: This concept analysis obtains a better understanding of CoC in children with chronic conditions in all age ranges and might guide better nursing practice and patient care. Healthcare providers and organizations can utilize the insights from this analysis to assess and improve care delivery to children with chronic conditions. By prioritizing the attributes of CoC and addressing the identified antecedents, they can enhance the overall patient experience and health outcomes. However, children in specific age ranges require different support and care from parents, healthcare providers, and other relevant organizations regarding chronic conditions. The future concept analysis in CoC in children should select the specific age or chronic condition to better understand the specific population that allows improvement in the care plans.

Exploring Pediatric Nurses' Experience in Child Abuse Cases: A Pilot Study

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Purpose/Aims: The purposes of this pilot study were (a) to examine the lived experience of pediatric nurses who have cared for families—including possible offenders—at the bedside during a child abuse investigation and (b) to explore how pediatric nurses manifest an authentic presence in these circumstances.

Background: Pediatric nurses care for patients harmed by their caregivers. Sometimes, they must care, too, for possible offenders at the bedside. Even though nurses experience challenges in caring for individuals who have harmed children, some are able to provide authentic compassionate care; in contrast, and antithetical to core nursing values, previous research demonstrates some nurses explicitly state they do not possess the desire or the capacity to provide authentic care to individuals who have harmed children. Research on this phenomenon is limited and centers primarily on nurses' general experiences.

Individuals who harm children are clearly a fraught societal category. Consequently, they are stigmatized and extremely marginalized. However, nurses are called on to care for <u>all</u>, including persons who harm their children. How individual nurses can cultivate an authentic caring presence with this highly challenging population is unknown. Therefore, research among successful nurse exemplars is required to inform broadly applicable nursing best practices.

Methods: IRB approval was obtained through the University of Colorado. This study used hermeneutic phenomenological methodology guided by Watson's theory of human caring and the philosophical foundations of caring science, compassion, love, and unity. Data collection occurred virtually through semi-structured interviews, reflexive journaling, and an online demographic survey.

Results: Three interviews have been completed. All participants are female with extensive pediatric nursing experience (i.e., ranging from 7-40 years). Analysis is currently underway. Findings will consist of themes, supported by participant quotes. Preliminary themes include the following: "nurses participate in a double act"; "these care situations are emotionally and physically exhausting"; and "it is the exception to provide empathy to offenders."

Implications: This pilot study will contribute to a richer understanding of nurses' lived experience of caring for offenders, laying the groundwork for a subsequent, more robust study. A deeper understanding of this complex experience can lead to nursing-focused interventions that increase the quality of care received by known or potential offenders. Understanding the patterning developed in these situations could illuminate primary methods nurses employ to overcome stigma and challenges associated with caring for individuals who have harmed children; this knowledge base can lead to the development of interventions and strategies that foster and promote authentic caring among pediatric nurses and/or other individuals seeking to care more authentically.

External Urinary Catheters in Pediatric Females: A Quasi-Experimental Study Proposal

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Purposes/Aims: To measure the effect of utilizing external female urinary catheters in pediatric patients on the incidence of catheter-associated urinary tract infections (CAUTIs) and adverse events (pressure injury and skin breakdown).

Rationale/Background: Prevention of CAUTIs is a constant need in healthcare. The incidence of one CAUTI can cost a hospital between $1,000 and $10,000 with an overall CAUTI-related impact on the healthcare system of over $340 million per year. CAUTIs are the cause of most healthcare acquired infections. Decreasing the incidence of CAUTIs will improve patient outcomes and decrease the financial burden on the healthcare system. There is a great deal of evidence to support the use of external urinary catheters in the adult population to significantly reduce CAUTIs and indwelling catheter use. No research has been done on external urinary catheters in pediatrics.

Methods: This quasi-experimental study will review retrospective data from 2020 until 2023 at a large pediatric hospital in Utah on CAUTI incidence and indwelling urinary catheter use. Patients that meet inclusion criteria will use the external female urinary catheter instead of an indwelling urinary catheter. Patients included in the study will be female, between 13 and 18 years old, inpatient, and require close urine output monitoring. Participants must also have physician approval to be part of the study. Data will then be collected to determine the effect of external catheter use on CAUTI incidence and indwelling urinary catheter use. The impact on CAUTI incidence and indwelling urinary catheter use for 12 months following implementation of the external female catheters will be measured. Further, data on any adverse events related to the use of the external catheter will also be recorded and collected.

Assessment of Findings: A power and sample size calculation was done using a Poisson analysis using a 1-tail test and 0.05 Type I error rate. There is an expectation for a 30% decrease in the base rate of urinary tract infections with the expected base rate of infections at 2.55 urinary tract infections per 1000 catheter days. The duration of the study will be approximately 12 months. With this information, the recommended sample size is an n of 251 to reach the required 91,600 catheter days needed to show statistical significance. The need for a large sample size is chiefly driven by the low base rate of urinary tract infections.

Conclusions: We hope this study will address the gap in research on external urinary catheters in children. Because of the relatively small number of pediatric patients requiring the use of urinary output monitoring with an indwelling catheter and the low base rate of urinary tract infections, the feasible sample size for this study will also be small due to time and resource restrictions. We hope this study opens the door to further research on external urinary catheters in pediatric patients to prevent urinary tract infections. Even the prevention of one infection is worth the time and effort in this area of research.

CHILD HEALTH / ILLNESS

Oxygen Administration during Pediatric Seizures: An EBP Project

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Background: There is conflicting guidance within our institution, a tertiary care pediatric hospital in the Intermountain West, whether oxygen should be administered during seizures for hospitalized children. Some nurse educators and physicians state that seizure duration will decrease if oxygen is not administered during a seizure and therefore, they do not recommend it as a seizure intervention, while others believe that oxygen administration will improve patient outcomes. There is a lack of clarity regarding best practices for oxygen administration during seizures for hospitalized children.

Aim: The purpose of this evidence-based practice project was to analyze whether oxygen should be applied to children during seizures and to evaluate how peri-ictal oxygen use affects patient outcomes.

Methods: We searched PubMed using the following search strategy: (seizure* OR epilepsy) AND oxygen AND hypox* NOT neonatal. Original research published in 2013-2023 that addressed patient outcomes related to peri-ictal oxygen use were included. This search yielded a total of 187 articles and five articles were ultimately included. The articles were critically appraised using the Johns Hopkins Evidence Based Practice Model.

Results: All of the selected articles included adults as their study population, and we did not identify any articles that investigated peri-ictal oxygen use in pediatric patients. Population sizes ranged from 39-114 patients. Study designs were varied and included a narrative review, a scoping review, a retrospective study, a non-randomized multicenter prospective study, and a quasi-experimental study. Four out of the five articles stated that oxygen administration during a seizure was correlated to positive patient outcomes, specifically that it decreases the chance of sudden unexplained death in epilepsy (SUDEP) and postictal generalized EEG suppression (PGES). PGES is a period of suppressed brain activity often occurring after generalized tonic-clonic seizure, which is the most significant risk factor for SUDEP. One article found no significant statistical difference in patient outcomes between those who did and did not receive oxygen during seizures. One article mentioned repositioning and suctioning as other peri-ictal interventions that improved patient outcomes (reduces duration of respiratory dysfunction and SUDEP and risk of PGES).

Conclusion: These articles suggest that peri-ictal oxygen administration results in favorable patient outcomes and there is no evidence that suggests oxygen administration harms or worsens patient outcomes. This research offers adequate evidence that oxygen should be administered during seizures among hospitalized children. However, research surrounding this topic is limited and more research using a more robust study design, notably randomized controlled trials, is needed. Additionally, research specific to a pediatric population is markedly absent and desperately needed to definitively demonstrate a benefit to peri-ictal oxygen administration in children.

Parents Perceptions of Healthcare Team Support during an Acute Hospital Stay

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Purpose/Aims: This study sought to examine parent caregivers' perceptions of social support received from members of a formal network comprised of the healthcare team during the hospitalization of their infant for congenital heart defect (CHD) surgery.

Rationale/Conceptual Basis/Background: Parents of children with a CHD experience increased levels of stress during the hospital stay which can have long-term impacts on their mental health. Approximately 20%-50% of parents report increasing anxiety, depression, and stress related to hospitalization. Parental caregivers who stay at their infant's bedside are isolated from social support networks just when additional social support is needed. Thus, supplementary support is necessary to fill these gaps. There is some evidence that parents receive supplementary support from members of the healthcare team, yet how teams provide support is unclear, as is whether formal support networks could be leveraged to improve parental stress.

Methods: This social network study recruited parental caregivers with an infant admitted to a tertiary children's hospital for repair of a CHD. Semi-structured interviews focused on parents' perceptions of social support received from the care team and interactions perceived as not supportive/stressful. Using a hybrid deductive-inductive qualitative descriptive approach, transcribed data were coded by literature-derived concepts including types of support and sources of support/stress ambivalence (k=0.91). The team coded the remainder of the interviews inductively focusing on gaps in support. The coders met to review any selections that didn't meet current definitions and coded those sections by consensus.

Results: Of 20 participants enrolled, 18 (90%) completed the interviews. Most were mothers (n=17, 94.4%) with an average age of 29.4 (SD=5.38). Infants were full-term (n=17, 94.4%), prenatally diagnosed (n=10, 55.6%) and average age of 3.8 months (114.11 days; SD=97.39).

Relationships with hospital staff were complex and dependent on parental perceptions of the balance between supportive and stressful interactions. To receive support, parents needed to build rapport and establish a trusting relationship with the healthcare team. Parents indicated supportive relationships were established when the team humanized care and connected with them as individuals. For example, involving parents in the plan of care, teaching them to care for their child, and respecting their role as the parent. Healthcare team members provided informational support most often, but parents also described situations involving emotional and practical support.

Parents noted instances in which they felt unsupported due to stressful interactions with the hospital staff. These included poor communication surrounding the plan of care and feeling uninvolved in their child's care. Parents described a preference for receiving updates, especially bad news, from someone with whom they had an established relationship. Poor communication and connection with the healthcare team increased parental uncertainty and helplessness and could cause increased parental vigilance.

Implications for Translation to Practice/Further Research/Policy: Findings suggest that parents' perceptions of support are contingent on a balance between supportive and stressful interactions with the healthcare team. Improving communication could facilitate improved support and decrease stress during hospitalization. Healthcare teams should seek opportunities to establish relationships by continuing to focus on individualized care using family-centered care models.

Funding: This study was supported by funding from Sigma Theta Tau Gamma Rho Chapter and the Consortium for Families and Health Research.

Sociodemographic Influence on Pediatric Referrals for Epilepsy Surgery

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Purpose/Aims: Children with epilepsy face many hardships, including an increased mortality rate, psychosocial decline, direct medical costs, and indirect costs related to lost productivity. Underutilization of epilepsy surgery can lead to avoidable pediatric deaths, and delay in the time to surgical intervention can contribute to cognitive and psychosocial decline. Existing studies show that sociodemographic variables influence a patient's likelihood of being referred to an epilepsy specialist and impact the duration of epilepsy before receiving epilepsy surgery treatment. This project aims to evaluate the impact of race, gender, language of care, location, insurance type, and social determinants of health on the referrals for epilepsy surgery at a free-standing children's hospital and Level 4 Epilepsy Center.

Rationale/Background: Epilepsy is a complex neurological condition that poses a significant health risk to all individuals with active seizures. According to the Centers for Disease Control, 3.4 million Americans have active epilepsy. When looking at the nation's pediatric population, 1% of children ages 0-18 have epilepsy. Sudden Unexpected Death in Epilepsy (SUDEP) is a well-studied phenomenon in which a person with epilepsy, who was in their usual state of health, dies suddenly and unexpectedly. Approximately 1 in 1000 people with epilepsy die from SUDEP annually. However, this risk increases to 1 out of 150 for people with medically intractable seizures. When medication fails to control seizure activity adequately, epilepsy surgery can play a vital role. Despite research establishing epilepsy surgery as a safe and effective treatment for medically intractable epilepsy, surgical intervention is still underutilized.

Methods: This retrospective cross-sectional study will utilize data extracted from the electronic medical record between 2020-2024. Eligibility criteria will include patients seen by a neurologist in the ambulatory setting at Seattle Children's with an ICD code for seizure documented in the electronic medical record. Patients will be excluded if they are an established neurosurgery patient or have a history of prior neurosurgical procedures. Demographic variables will be exported using an electronic investigator-developed data collection form, including sex, race, language of care, primary insurance type, zip code, and age. Descriptive statistics will be used to describe the demographics of the sample and survey findings.

Continuous variables will be assessed for normality using histograms and QQ-plots. Categorical variables will be summarized using frequencies and percentages. Multivariable binomial regression models with a log-link will be used to assess the relationship between obtaining a neurosurgery referral based on sociodemographic characteristics. Results will be reported as risk ratios and 95% confidence intervals.

Assessment of Findings: Results will include the sociodemographic data and results from a Social Needs Questionnaire for patients with epilepsy (anticipated N = ~8000) and those referred for epilepsy surgery evaluation (anticipated N = ~400) over a four-year period from 2020-2024.

Conclusions: Findings will enhance the knowledge about the equity and utilization of epilepsy surgery in the pediatric population at a free-standing children's hospital with a level 4 Epilepsy Center. Study findings may inform recommendations for future research and, if needed, advise interventions to improve the quality and equity of pediatric epilepsy care.

CHILD HEALTH / ILLNESS

Spirometry Monitoring & Asthma Responsibility in Kids: Mixed Methods Study

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Purpose and Aim: This study aims to determine the feasibility, acceptability, barriers, and facilitators for home spirometry use for children with persistent asthma.

Background: Asthma is a leading chronic respiratory condition affecting over 4 million children in the United States. Asthma management occurs primarily in the home; optimal shared-management between parent and child reduces overall healthcare costs and has been associated with improved healthcare outcomes and quality of life.

Spirometry, a diagnostic test that measures lung capacity and airflow, is a standard clinical monitoring tool for asthma, though it has traditionally been conducted in clinical settings only. Recent advancements in portable spirometers have made spirometry available for testing in the home. Such monitoring may enable regular assessments and early detection of changes in respiratory health, facilitating timely interventions and personalized asthma management. While home spirometry has been shown to be effective in two studies with young adults (18-26 y/o) and adults (18+ y/o) as a feasible and acceptable way to improve asthma outcomes, more needs to be understood about the feasibility and acceptability in school-age children. Given this gap, this study aims to assess the feasibility, acceptability, barriers, and facilitators of home spirometry use in school-age children (7-11 years) with persistent asthma and their parents/caregivers.

Methods: This mixed methods cross-sectional study will examine parent-child dyads that previously participated in a pilot RCT testing a novel asthma management intervention. Dyads will include children with persistent asthma and one of their parents or primary caregivers. Following consent and assent, dyads will complete individualized online surveys and participate in a dyadic tele-interview. Surveys will assess asthma management, responsibility, medication adherence, quality of life, and spirometer feasibility and acceptability. The dyadic qualitative semi-structured interview will examine the feasibility, acceptability, barriers and facilitators of in-home spirometer use. Feasibility and acceptability will be assessed using quantitative surveys and a semi-structured interview. Barriers and facilitators will be further explained by qualitative analyses of the semi-structured interview.

Assessment of Findings: Enrollment and data collection is underway. Preliminary results will be available in time for the conference.

Conclusions: Study results will provide insight into the feasibility and acceptability of home spirometry use from the perspectives of school-age children with asthma and their parents. This information will inform future interventions that may include spirometry as a tool for asthma management at home. Implications for clinical practice include the ability to track the onset of an asthma exacerbation at home and intervene early. Additionally, participant perspectives may support the facilitation of an integrated shared-management system and highlight communication styles around symptom awareness between the parent and child with asthma.

CHILD HEALTH / ILLNESS

The Effect of Prescribed Tummy Time on Developmental Milestone Achievement in Infants

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Purpose: This project aims to examine the effect of provider education and the use of prescribed daily tummy time on developmental milestone achievement in infants 0-3 months of age.
Background: Several benefits of daily tummy time have been observed and documented, including enhanced infant motor development, improved mobility, strength, and head clearance, reduced occurrence of cranial asymmetry, and decreased risk of childhood obesity. The American Academy of Pediatrics (AAP) advises all infants, beginning at birth, partake in organized, supervised daily tummy time during awake periods, starting with short increments and increasing to at least thirty minutes a day, as tolerated, with a goal to be at one hour of tummy time by three months of age. Since 1994, when the AAP initiated the "Back to Sleep" campaign, the number of infants participating in daily tummy time has significantly declined, leading to an increase in adverse outcomes within the infant population, including increased risk of developmental delay, delayed motor milestone achievement, and cranial asymmetry.
Methods: This quality improvement project will be conducted utilizing a quasi-experimental design. This project will recruit a convenience sample of providers caring for infants 0-3 months of age in a rural health center in southwestern Washington. The intervention will comprise two components. First, an educational meeting consisting of provider education, strategies, and exposure to current AAP guidelines for infant tummy time will be held. Next, a tummy time prescription smart phrase will be created, which will include a QR code detailing positioning techniques, videos, and resources, as well as information on developmental milestones for infants that will then be embedded into the electronic health record for providers to prescribe tummy time during healthcare encounters. The smart phrase prescription with the QR code will be included in the printed after visit summary and provided to the patient. The Survey of Well-being of Young Children (SWYC) developmental milestone measurement tool will be used to collect the primary outcome data. Additional data to be collected includes provider demographics, provider use of tummy time smart phrase prescription, and parent report of tummy time implementation. Data collection will be conducted from September through December 2023. The planned statistical analysis includes IBM SPSS statistical analysis for quantitative methods and Qualtrics for determining acceptability and feasibility.
Anticipated Outcomes: Completion of data analysis is expected by February 2024.
Implications: The anticipated outcome hypothesis is that infants prescribed daily tummy time will be less likely to experience developmental delay than infants without. Findings from this project may provide support for the use of prescribed daily tummy time as a viable strategy for promoting fine and gross motor development in infants in primary care practice.

CHILD HEALTH / ILLNESS

Using a Mindfulness App: Experiences of Parents of a Child with Medical Complexity

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Background/Rationale: The number of *children with special health care needs* (CSHCN) in the US is nearly 20 percent of children, representing a total of 13.6 million children nationally. CSHCN are those who have, or are at increased risk for, a chronic physical, developmental, behavioral, or emotional condition that requires health and related services of a type or amount beyond that required by children generally. A subgroup of CSHCN are children who have the most intensive healthcare needs known as *children with a medical complexity* (CMC). Although no standard definition of medical complexity exists, four domains characterize CMC: 1) chronic, severe health conditions; 2) substantial health service needs; 3) major functional limitations; and 4) high health resource utilization. Parents of CMC experience several challenges. In addition to typical caregiver tasks, parents of a CMC may experience added stress related to illness management, uncertainty of the child's condition, financial strain, time conflicts, and guilt. Research evidence supports the feasibility, acceptability and usability of mindfulness apps in students and parents of children with chronic pain, however, to our knowledge, there is no research examining the use of a mindfulness app in parents of a CMC.

Purpose/Aims: The purpose of this study is to describe the parent experience of using the mindfulness app.

Method: This descriptive qualitative study is part of a larger study that examined the mental health effects of mindfulness on caregivers of a child with medical complexity. Caregivers who participated in the 4 week mindfulness study could volunteer for an interview conducted over Zoom. Focused questions about the utility of the app, barriers to use, factors facilitating use, and perceptions about the app were asked. Interviews were transcribed verbatim and coding for themes occurred in tandem with continuing data collection to assess for saturation.

Results: Currently, three interviews have been completed. Although saturation has not been reached, initial results indicate that parents perceive the app as useful, but time and cost are barriers to continuing use. We anticipate being able to present more complete results at the conference.

Implications/Conclusions: Mindfulness may be an intervention that works well with some parents. The ease of mobile applications has increased the availability of mindfulness sessions for parents who may be unable to physically go to a session or cannot afford counseling, but some barriers to full use exist. It is important for pediatric healthcare providers to offer and encourage resources that are cost effective and flexible to use. By better understanding parent experiences using the app, healthcare providers may be able to assist parents in overcoming barriers to using this resource.

An Examination of Hospital Length of Stay in Adults with Moderate Traumatic Brain Injury

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Purposes/Aims: The purpose of this study to describe the socio-demographic and health characteristics of individuals having moderate classification of traumatic brain injuries (TBIs) and to test associations between these characteristics and hospital length of stay.

Rationale/Conceptual Basis/Background: Moderate Traumatic Brain Injuries (TBIs) have been classified in the literature as the ‘gray zone’ of neurotrauma. Despite accounting for 22% of all TBIs, most extant literature focuses on ‘mild’ or ‘severe’ TBIs or combines TBI classifications such as ‘mild to moderate’ or ‘moderate to severe’. Limited information exists to describe individuals classified as having moderate TBI. The purpose of this study is to delimit the ‘gray zone’ of neurotrauma. Specifically, the study describes the socio-demographic characteristics hospital length of stay (LOS),and associated psychosocial health characteristics for patients aged 18–64 years hospitalized for moderate TBIs overall as well as by sex. Further, we test these variables as predictors of hospital length of stay in this population.

Methods: This is a cross sectional secondary data analysis. Data were collected from the National Trauma Databank (NTDB), a large database combining hospital discharge data from over 747 trauma hospitals-- years 2019-2021. Key measures examined were hospital length of stay, history of alcohol abuse, history of mental health disorders, and substance abuse as well as other socio-demographic and health characteristics of who were classified with moderate TBIs. Data was analyzed utilizing STATA version 17 statistical software. Descriptive statistics were used to describe the population characteristics and linear regression was used to model hospital LOS in days as a function of the population characteristics.

Assessment of Findings/Outcomes Achieved: Study findings concluded that alcohol abuse disorder, mental health disorder, and increased age were independently associated with longer hospital length of stay among patients with moderate TBI. Insurance status and mechanism of injury (fall and abuse related TBIs) were significantly associated with shorter length of hospital stay among patients with moderate TBI. History of substance abuse, history of diagnosis of a top seven chronic illness, race, and sex did not have a significant impact on hospital length of stay in this population.

Conclusions/Implications: Future research is needed to focus on alcohol abuse disorder and mental health disorder and to understand how predisposing needs impact acute hospitalizations for those diagnosed with moderate TBI.

Atrial Fibrillation Management in Hispanic Adults

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Background: Research has found atrial fibrillation (AF) to be the primary or a contributing cause of death on 183,321 death certificates, and an underlying cause of death for 26,535 Americans in 2019. Findings indicate an increased AF diagnosis in White people compared to racial and ethnic minorities, contrasting widespread findings of increased prevalence of cardiovascular disease and ischemic strokes in minorities. Significant disparities—by race and socioeconomic status in disease distribution and access to testing and lifesaving treatments—have been documented, specifically associated with social determinants of health (SDOH); i.e., the conditions in which people are born, grow, live, work, and age. The Hispanic population is the second-largest ethnic group, comprising 18.7% of the total population, nonetheless few studies describe AF diagnosis, treatment, and outcomes in Hispanics (Linares et al., 2019).

Purpose/Aims: To explore the SDOH, select sociodemographic, and symptom burden in Hispanic/Latino adults compared to non-Hispanic/Latino adults with AF who obtain rhythm and rate control treatment.

Methods: A cross-sectional correlational design was used. Data was extracted from the electronic health record of 750 participants receiving treatment for AF between June 2020 and June 2022. Inclusion criteria: Age 21 years and older, gender (males, females, other), and ECG-confirmed AF. Measurements: Age, race, ethnicity, gender, health plan, body mass index, hypertension diagnosis, smoking, alcohol use, admitting/primary/ secondary diagnoses, type of AF diagnosis, employment status, access to healthcare, type of community, AF treatment (rhythm, rate control), reported symptoms.

Data Analysis: Descriptive (frequencies, measures of dispersion) and inferential statistics, including bivariate (chi-square tests and t-tests) and multivariate (binomial logistic regression) analyses.

Findings: Select clinical findings were not significantly associated with ethnicity (e.g., smoking status, admitting/primary/secondary diagnoses, or diagnoses of hypertension were not associated with ethnicity). Alcohol use was greater in non-Hispanics, and being overweight, obese and morbidly obese was greater in Hispanics. Hispanic participants were younger than non-Hispanic participants. Ethnicity was not significantly associated with any of the AF pharmacological and non-pharmacological care treatments evaluated in this study (i.e., in-hospital antiarrhythmic drugs, in-hospital rate control drugs, prior catheter ablation, prior surgical ablation, and cardioversion).

Implications for Research: The American Association of Colleges of Nursing goals for nurses include addressing pervasive inequities in healthcare to meet the needs of all individuals. Studies have found great variability in AF symptomology, and current treatment guidelines recommend clinical treatment decisions based on a patient’s symptoms. Findings from this study will inform and guide treatment strategies for Hispanics with AF. The study revealed disparities in healthcare. In this cohort, Hispanics traveled longer distances for care, sought care at an earlier age, and had catheter ablations more frequently than non-Hispanics; obesity was a prevalent comorbidity among Hispanics.

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Cross-Sector Collaborations: Addressing Health Inequities in Transportation

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Purposes/Aims: This study aims to explore strategies in cross-sector collaboration that state public health department (SHD) staff perceive to be successful in addressing health inequities.

Rationale/Conceptual Basis/Background: Within the U.S., the COVID-19 pandemic revealed the significance of chronic conditions as precursors to poor health outcomes, with some of the most prevalent underlying conditions among COVID-19 patients including diabetes, hypertension, and cardiovascular disease. State health departments (SHD) and the transportation sector have critical roles in promoting health equity and reducing chronic disease disparities. The social determinants of health (SDOH), or the social, economic, and built environments in which people live, learn, work, and play, are an important basis for consideration.

The transportation sector is increasingly the locus of innovative partnerships. Public transportation allows the community to access numerous goods and services necessary for well-being, including healthy food options and medical care services among others. A lack of transportation infrastructure contributes to health inequities, and following the COVID-19 pandemic, experts emphasized that safe and thriving public transit options are essential to reducing health disparities.

Methods: With support from the Centers for Disease Control and Prevention and the Association of State and Territorial Health Officials (ASTHO), we conducted semi-structured interviews with SHD and state transportation agency staff. ASTHO identified case study SHDs for apparent, innovative cross-sector collaborations related to SDOH. Interview questions included those inquiring about SHD staff roles, funding, sustainability, and the advancement of health equity initiatives in these cross-sectoral collaborations. Atlas.ti v23 software was used to complete a thematic content analysis of the qualitative data.

Assessment of Findings/Outcomes Achieved: Common themes included funding/resource planning, program sustainability/growth, and benefits/challenges of collaboration. Braiding of funds was considered complex, and some states utilized innovative strategies for working with private, community-based, and philanthropic entities. Organizations with leadership buy-in and cultures that fostered collaborations were beneficial in enhancing program progress. Collaboration benefits included that shared interests and goals provided a synergistic effect. Overall, capacity, efficiency, and advocacy were perceived to be enriched by collaborations. Challenges were that organizational priorities sometimes conflicted, and misunderstandings of a particular entity’s resources and capabilities sometimes occurred. Finding a balance between communicating with all necessary organizations without overburdening community partners was considered difficult.

Conclusions/Implications: Recommendations for SHDs include (1) allowing an intermediary agency to coordinate the budget and programs; (2) applying for grants that make specifications within requests for proposals allowing for funding flexibility in project budgets; (3) developing a culture of collaboration and making use of interagency councils to share information vital to managing funds; (4) integrating administrative data via development of sharing agreements across sectors or organizations to support funding needs; and (5) including a robust evaluation of cross-sector initiatives to support future braiding opportunities. Innovative solutions for coordinating public health and transportation initiatives and promoting the sustainability of successful collaborations are needed to enhance these efforts. SHDs play an important role in developing and building relationships with transportation partners to address health inequities.

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Implementation of Nurse-Led Medication Titration to Improve Outcomes in Heart Failure

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Aims: This quality improvement project aims to improve the optimal use of guideline-directed medical therapy for heart failure with reduced ejection fraction – and the resultant heart failure outcomes (including patient quality of life, heart failure readmission risk, and mortality risk) – through the implementation of a nurse-led protocol for the titration of guideline-directed medical therapy at the Intermountain Heart Institute Cardiology Wasatch Back offices.

Background: Heart failure with reduced ejection fraction carries significant morbidity and mortality risks. Optimal use of guideline-directed medical therapy improves heart failure outcomes with a dose-dependent benefit. Multifactorial barriers delay the initiation and titration of this life-saving therapy. Due to the available local clinic infrastructure, face-to-face provider-based encounters for the stepwise titration of heart failure therapy have occurred quarterly rather than the recommended weekly to biweekly visits, resulting in delayed initiation and optimization of medical therapy and increased risk of adverse heart failure outcomes. US and European clinical practice guidelines for managing heart failure encourage a multidisciplinary approach to treatment. Nurse-led medication titration overcomes several access barriers and has been proven to improve patient quality of life and reduce heart failure readmission and mortality risks. Still, the US adoption of nurse-led titration lags European centers.

Methods: Utilizing the Johns Hopkins Evidence-based Practice Model to facilitate the translation of evidence-based medicine into patient care, the quality improvement team developed a protocol for nurse-led heart failure medication titration founded on evidence-based heart failure treatment guidelines. Nurses will complete weekly telehealth encounters with the patient, reviewing reported symptoms, vital signs from home monitoring, and laboratory values; nurses will then titrate heart failure medications per protocol based on physiologic parameters. The quality improvement project will follow patients for two months in the nurse-led medication titration clinic. An executive summary will be presented to Intermountain Heart Institute Cardiology leaders as feedback with strategic plans and recommendations for implementation.

Assessment of Outcomes: This quality improvement project will report on the number of patients referred to and enrolled in the nurse-led medication titration clinic, including the number of telehealth encounters per patient, number of medication titrations per patient, mean nurse time per encounter, and any reported safety concerns/adverse events experienced during the protocol. Qualitative data will be reported to evaluate the feasibility, usability, and provider and nurse satisfaction with the nurse-led medication titration protocol.

Conclusions: Nurse-led titration is an evidence-based means for optimizing guideline-directed medical therapy and a vital aspect of a multidisciplinary approach to heart failure management to improve patient outcomes. This quality improvement project will pilot a blueprint for a nurse-led heart failure medication titration protocol to facilitate refinement and subsequent broader utilization within the Intermountain Heart Institute Cardiology offices; it will also provide data for creating the business case for a nurse-led heart failure medication titration clinic.

Social Support Among Stroke Survivors: Concept Analysis

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Despite advances in stroke care, stroke is one of the major causes of chronic disability, requiring short and long-term care following a stroke. Most stroke survivors experience a sudden transition of physical and mental health changes. To ease the transition, social support, which promotes health and well-being, may play an essential role in stroke recovery by reducing stress and supporting stressful situations. This concept analysis aimed to define social support among stroke survivors and enhance the understanding of the concept and its implications for stroke survivors, their families, and communities. A literature review using PubMed, MEDLINE, CINAHL, and Web of Science databases yielded 57 relevant articles published between 2013 and 2023. Rodgers' evolutionary concept analysis method was used for the concept analysis of social support. Our analysis identified the following antecedents: socio-demographic characteristics and social networks. Findings indicate that emotional, financial, material, and informational support were attributes of the concept. Consequences included stroke survivors' quality of life, physical impacts, psychological impacts, and social engagements. Future studies are needed to investigate factors affecting social support among stroke survivors. A plan of care or targeted interventions focusing on social support may improve the recovery process, quality of life, and social development of stroke survivors.

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CHRONIC ILLNESS

Structural Racism’s Impact on Heart Failure Symptoms and Inflammation in Black Adults

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Background: Black adults have a higher risk of heart failure (HF), with earlier onset and worse outcomes than other populations. Structural inequalities affect disease prognosis due to increased inflammation that worsens HF symptoms, likely linked to chronic stress resulting from racial discrimination. The role of racial stress on patient-reported outcomes in Black persons with HF is not well understood. The purpose of this study is to examine the connection between racial stress, inflammation (interleukin [IL]-1β and IL-6), and symptoms in Black adults with HF.
Methods: Black adults with HF (N=41) were enrolled in this cross-sectional study. IL1-β and IL-6 were self-collected via Mitra microsampling and analyzed by immunoassay. Measures included Index of Race Related Stress Brief (IRRS), HF Somatic Perception Scale (HFSPS), SF-36 questionnaire, Multidimensional Fatigue Inventory (MFI), and PROMIS Dyspnea Severity. Linear regression analyses, controlling for ejection fraction, age, gender, and standard cardiovascular comorbidities, were performed.
Results: Participants were 57±12 years of age and 66% female. Total racial stress was positively associated with chest pain (β=.390, p=.049) and IL1-b (β=.480, p=.024). Institutional racial stress was positively associated with MFI general fatigue (β=.494, p=.014), MFI physical fatigue (β=.605, p=.003), MFI reduced motivation (β=.452, p=.035), MFI mental fatigue (β=.527, p=.004), HFSPS total (β=.426, p=.021), HFSPS chest pain (β=.509, p=.008), and IL1-β (β=.523, p=.012) and negatively associated with SF-36 measures of physical functioning (β=-.509, p=.010), ability to perform daily activity (β=-.563, p=.005), and social functioning (β=-.449, p=.041). Individual racial stress was associated with dyspnea (β=.445, p=.019) and HFSPS chest pain (β=.573, p=.001). No associations with IL-6 were found.
Conclusion: Experienced racial stress was associated with higher physical and mental fatigue, chest pain, and increased IL1-β levels and lower physical functioning, suggesting the detrimental effects of racial stress on symptom severity and inflammation in Black adults with HF. A better understanding of how structural racism impacts the experience of HF in Black adults is needed to enhance patient care.

Symptom Correlations Among Patients with Idiopathic Pulmonary Fibrosis

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Purpose/Aims: Idiopathic pulmonary fibrosis (IPF) is a chronic restrictive lung disease that results in scarring of the lung tissue due to an unknown cause. The four primary interconnected symptoms making up the symptomology of IPF are dyspnea, quality of life (QOL), anxiety, and depression. Dyspnea is experienced by 90% of patients with IPF and is correlated with reduced QOL. Prolonged anxiety and depression occur frequently in patients with IPF. We aimed to examine correlations among symptom variables in a group of community-dwelling IPF patients.

Rationale/Conceptual Basis/Background: Symptomology is a set of symptoms characteristic of a medical condition. With better understanding of the IPF patient's symptomology, strategies for symptom management can be identified to alleviate distressing symptoms. The University of California San Francisco (UCSF) Symptom Management Theory (SMT) provides a framework to implement a future intervention aimed at improving symptoms experienced by IPF patients. The theory has three central concepts: symptom experience, symptom management strategy, and symptom outcome. Analysis of the correlations among symptoms experienced by community-dwelling IPF patients, helps to identify the concept of the symptom experience in this context and subsequently provides an opportunity to identify symptom management strategies to improve IPF symptoms and associated outcomes.

Methods: Community-dwelling IPF study participants were recruited from support group meetings and study flyers. Participants completed self-report measures via a REDCap database. Dyspnea was measured using the University of California San Diego (UCSD) Shortness of Breath Questionnaire (SOBQ). QOL was measured using the St. George's Respiratory Questionnaire (SGRQ). The General Anxiety Disorder-7 and Patient Health Quesitonnaire-9 were used to measure anxiety and depression, respectively. Pearson's correlation coefficient was calculated with a Bonferroni correction to assess correlations among symptom variables using StataIC16.

Assessment of Findings: A total of 29 participants (avg age = 73, % men = 57%) completed the symptom self-report measures. The level of statistical significance was set at $p \leq 0.008$ for a Bonferroni correction. Analyses examining the relationship among the symptom variables demonstrated a statistically significant and strong correlation between dyspnea and QOL ($r = 0.84$, $p < 0.0001$) and anxiety and depression ($r = 0.59$, $p = 0.0007$). On the other hand, QOL and depression were moderately correlated ($r = 0.39$, $p = 0.04$), dyspnea and depression were moderately correlated ($r = 0.45$, $p = 0.14$), and dyspnea and anxiety were very weakly correlated ($r = 0.15$, $p = 0.43$).

Conclusion/Implications: This study supports the strong relationships between dyspnea and QOL as well as anxiety and depression. However, the weaker relationships observed between dyspnea and anxiety were different than previously published literature and may be an attribute of the study participants. Combined, this data supports the notion that IPF symptomology is interconnected and complex but also that the symptom relationships may be diverse across IPF populations. Therefore, understanding this uniqueness may be an important consideration for future therapies developed to reduce IPF symptomology. Symptom management strategies that can be used to alleviate the complexity of symptoms experienced in this patient population are needed for improved IPF patient outcomes.

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The Feasibility of Remotely Delivered Qigong for Female Breast Cancer Survivors

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Purpose: This study aims to assess the feasibility of a remotely delivered Spring Forest Qigong (SFQ) intervention and explore changes in physical and psychological well-being among female breast cancer survivors (BCS).

Background: Cancer is the second leading cause of death in the United States, with female breast cancer being the most prevalent. BCS often undergo multifaceted treatments, which may trigger various adverse effects, increasing their risk of enduring physical and psychological distress. Abundant evidence suggests that mind-body techniques, including Qigong, hold promise in not only alleviating physical but also psychological distress, thereby enhancing the quality of life among BCS. Qigong, rooted in a history spanning thousands of years and originating in China, combines physical movements, controlled breathing, meditation, and mindfulness to promote overall well-being. Qigong offers numerous health benefits, including stress reduction and support for the healing process. Among its many forms is Spring Forest Qigong (SFQ), recognized for its gentle movements suitable for individuals at any stage of health, and growing popularity. Despite its potential, limited research has explored the effects of SFQ. A recent study demonstrated that a remotely delivered SFQ is not only feasible but also significantly reduced neuropathic pain among spinal cord injury patients while enhancing their mood. These findings align with an earlier study involving patients with chronic pain. However, the feasibility of remotely delivered SFQ among female BCS is unexplored.

Methods: Design: Pre-post intervention, single armed study. **Sample:** A nationwide convenience sample of 40 female BCS will be recruited through flyers, social media channels, announcements on pertinent websites, community outreach, and collaboration with local Cancer Institutes in the Southeast. **Intervention**: Participants will undergo six hours of synchronous online SFQ training, followed by 12 weeks of in-home practice using the online video (45 minutes) of SFQ’s "Five Element Qigong Healing Movements" (minimum 3 times per week). **Measures**: Feasibility measures will include study recruitment and retention, as well as intervention acceptability (AIM), appropriateness (IAM) and feasibility (FIM) assessed post-intervention (range=4-low to 20-high). Objective measures of sleep quality, heart rate, and physical activity will be collected via the smart wearable device Fitbit to assess physical well-being. Perceived psychological well-being (Cohen’s Perceived Stress Scale, Patient Health Questionnaire-9, and State-Trait Anxiety Inventory) will be assessed pre-and post-intervention using reliable and valid measures. **Analysis Plan:** Frequencies, percentages, and the mean change from pre- to post-intervention along with the 95% confidence intervals will be calculated for the outcome variables of interest.

Anticipated Results: Although pending, the anticipated results will show the feasibility of a remotely delivered SFQ and explore changes in physical and psychological well-being among female BCS.

Implications: This pioneering study aims to assess the feasibility of a remotely delivered SFQ on BCS, utilizing a comprehensive approach that combines objective and subjective data. The preliminary feasibility data will help us understand how SFQ benefits BCS’s well-being and supports its promotion and translation in communities.

A Virtual Diabetes Prevention Weight-Loss Program in an Outpatient Surgical Clinic

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Background: Individuals suffering from obesity often require preoperative weight loss by providers and insurers to mitigate surgical risks and optimize outcomes. Metabolic dysfunction associated with obesity increases surgical risks due to insulin resistance. Individuals with obesity and metabolic dysfunction benefit from weight loss resources designed to address their unique metabolic challenges. Health equity factors impacting the delivery of disease-specific weight loss resources include accessibility and affordability. Evidence-based contributors to weight loss success include efforts to increase motivation, engagement in structured programs, and psychosocial support. Considering recent cultural transformations toward technology-based interventions, virtual weight loss programs have gained traction due to their impacts on accessibility and success in engaging patients in weight loss interventions. Despite these findings, their application in clinical practice remains underutilized.

Rationale: A needs assessment was completed at an outpatient surgical clinic in a large academic hospital to gather insight into quality improvement opportunities. A significant gap identified was the absence of disease-specific weight loss resources for prediabetic patients with obesity. A secondary gap included inaccessibility to supplemental weight loss support programs offered through the organization due to cost. After receiving approval from the clinic's weight loss specialty physician and connecting with a key stakeholder, a DNP project proposal was developed to address the identified needs.

Purpose: The project aim is to provide care in a remote format through a virtual type II diabetes prevention weight loss program as a supplemental resource for individuals with obesity and prediabetes preparing for elective surgery.

Methods: Guided by the Iowa Model and Johns Hopkins Evidence-Based Practice Model, implementation will include enrolling interested participants in a free virtual program known as *Transform 10* ®, comprised of weekly web-based nutrition sessions with interactive digital media, motivational/goal-setting exercises, text-based engagement, and utilization of remote self-monitoring tools. Baseline data will be collected through the program registration form before starting the program, including weight, motivation and confidence levels, and perceived social support. After enrollment, participants will complete one 60-minute on-demand session each week, followed by bi-weekly 15-minute lifestyle coaching telephone calls designed to reinforce action-based program activities and provide social support. After eight weeks, a post-intervention survey will be distributed to reassess primary outcome measures and participants' feedback/satisfaction with the remote tools provided.

Outcome: Primary outcomes will be assessed via self-report pre- and post-intervention, including weight measured in lbs., motivation and confidence levels rated on a 0-10 scale, and perceived social support using a Likert scale. Secondary outcomes will be assessed through a post-intervention feedback survey rating self-monitoring tool ease of use, literacy of content, preferred program components, opinions on virtual programs and ideal resources, and any barriers experienced during the intervention.

Conclusion: Findings will be analyzed to gain valuable insight into the practicality and feasibility of utilizing technology-based disease prevention programs for preoperative weight loss. Furthermore, a positive project impact could serve as a model for incorporating multi-faceted technology-driven interventions into comprehensive care plans in this setting to support weight loss goal achievement by optimizing patient engagement, satisfaction, and resource accessibility.

Exploring the Temporal Relationship between Diabetes Distress and Glycemic Control

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Background: Diabetes distress is a negative emotional response to diabetes, and its associated management. Research suggests that diabetes distress may be related to glycemic control directly or indirectly through modification of self-care behaviors, but evidence for these relationships is mixed. Whether there is a longitudinal relationship between diabetes distress and HbA1c is also unclear.

Purpose: To understand the relationships among diabetes distress, self-care behaviors, and glycemic control among adults with type 2 diabetes who participated in a self-management support intervention targeted at reducing distress and improving glycemic control.

Methods: This is a secondary analysis of data from a cluster randomized pragmatic trial of two models of diabetes shared medical appointments using the Targeted Training in Illness Management (TTIM) curriculum. The comparator interventions included a standardized model, with TTIM delivered by a health educator in a fixed order, and a patient driven model, with TTIM delivered by a team of a health educator, peer mentor and behavioral health provider, where topic order was selected by each cohort. The primary outcomes were diabetes distress, measured using the Diabetes Distress Scale 17 (DDS-17) and glycemic control (HbA1c). Self-care behaviors were measured at baseline and follow-up using the Summary of Diabetes Self-Care Activities (SDSCA). We conducted Pearson correlations and linear regressions to understand relationships between variables and a cross-lagged panel structural equation model to assess the longitudinal association between DDS-17 and HbA1c. Significant results were assessed as $p<.05$. Cross-lagged panel model fit was assessed as $X^2/df \leq 5$, CFI≥0.95 and RMSEA≤0.05 as indicative of a good fit.

Results: This was a large (n=1060) sample of adults (mean age=60.3 years) who were majority female (58.9%) and ethnically diverse (non-Hispanic White=56.6%, Hispanic/Latinx=27.5%, non-Hispanic Black=7.2%, non-Hispanic Other=6.8%). Prior results found no difference in outcomes between the comparator interventions. DDS-17 and HbA1c were positively correlated at both baseline (r=0.23, p<.001) and follow-up (r=0.19, p<.001), but changes in DDS-17 and HbA1c were not correlated (r=0.05, p=.28). A decrease in DDS-17 was associated with an increased frequency of exercise (B(SE)=-0.25(0.08), p=.002), diet (B(SE)=-0.30(0.08), p<.001) and foot checks (B(SE)=-0.30(0.09), p=.001). None of the changes in self-care behaviors, however, were significantly associated with HbA1c change.

The cross-lagged panel model detected no longitudinal relationship between baseline DDS and follow-up HbA1c, though there was a weak significant relationship between baseline HbA1c and follow-up DDS. The overall model ft was $X^2/df=64.52$; CFI=0.000, RMSEA=0.245, indicating a poor fit.

Discussion: Our findings indicate that changes in diabetes distress were not associated with changes in HbA1c, either directly or indirectly via self-care behaviors. Reduced distress may be related to improving self-care behaviors, which are important for general health and wellness, but may not contribute to enhanced glycemic control. In this study, participants experienced improvements in diabetes distress regardless of changes in HbA1c. Reducing the sense of being overwhelmed with self-management of diabetes is a valuable patient-centered outcome in its own right. However, reducing distress may not be a direct target for improving glycemic control.

DIABETES

Geospatial Mapping of Diabetes Programs and Equity Index Among Asian Americans in La

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Purpose: This study seeks to map distributions and relationships between diabetes programs, Asian American population density, and community health factors in Los Angeles County (LAC).

Background: Diabetes has reached epidemic proportions in the US and disproportionately affects marginalized groups, such as Asian Americans. The disparity in diabetes burden in Asian Americans is clear: they are 40% more likely to be diagnosed with diabetes and 60% more likely to have end-stage renal disease than non-Hispanic Whites. Diabetes self-management education/support programs (DSME) are shown to reduce complications and morbidity; however, participation in these programs is low (<10%). Factors affecting disengagement are complex, including community health variables such as cultural, socio-economic, health conditions, transportation, food environment, crime, and population burden factors (i.e., community and health equity index). We hypothesize that location disparities, environmental conditions, and socio-economics contribute to the disengagement in DSME. However, there are currently no geospatial resources in Los Angeles describing the distributions of DSME, Asian American ethnic enclaves, and community health factors to give us critical information for targeted outreach and policy development.

Methods: We collected county-level data from publicly available sources and mapped them using QGIS®, a free and open-source geographic information system software. Data included the location and number of DSME (via the American Diabetes Association website), the Asian American population in LAC (American Community Survey), and the Community Health and Equity Index (CHEI). The CHEI is an index developed by the Department of Public Health, which yields a score on a scale of 0 to 100. Lower values equate to better community health.

Results: Figure 1 shows the geospatial map of LAC. There is a clear trend in the lack of accessible DSME in LAC (n = 30), with nearly all DSME found in clusters rather than equitably distributed. Central LA has more DSME than South Bay (southwest of LAC); DSME are noticeably scarce in the San Gabriel Valley (southeast of LAC) and in some large areas of the San Fernando Valley (northwest of LAC), both of which have significant Asian American populations. There also appears to be a mixed or bipolar association between the number of DSME and CHEI in some areas. Central Los Angeles, which has a cluster of DSMES programs, has high scores of CHEI, while wealthier areas of the county (e.g., Westwood and Beverly Hills) have lower CHEI but with significant clusters of DSME.

Conclusion: This analysis highlights the use of geospatial mapping, reinforcing social determinants of health's impact on healthcare access. Future analysis will include traditional statistics to validate the results of the maps. Given that areas with high CHEI need DSME the most, immediate action is imperative to address DSME access disparities in LAC. We propose a multifaceted approach: expanding DSME to high CHEI areas, boosting education on the use of DSME among Asian Americans, using telenursing, and establishing monitoring and evaluation mechanisms of the public reach of DSME. Immediate action is vital to foster health and equity in changing environmental and social climates.

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Implementing a Metformin Induced Vitamin B12 Deficiency Screening Guideline

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Purpose/ Aim: The aim of this project is to implement an evidence-based clinical practice guideline (CPG) designed to increase the frequency of metformin-induced vitamin B_{12} deficiency screenings and determine the feasibility, useability, and clinician satisfaction with the CPG at a diabetes and endocrinology clinic in Utah.

Background: Metformin is a first-line medication frequently prescribed worldwide for treating individuals with type 2 diabetes mellitus and other conditions such as prediabetes, type 1 diabetes mellitus, gestational diabetes, obesity, and polycystic ovary syndrome. Metformin use has been known to cause vitamin B_{12} deficiency as early as three months and affects one in ten individuals. The American Diabetes Association (ADA) recommends annual screening for B_{12} deficiency for individuals prescribed metformin. An urban Utah diabetes and endocrinology clinic indicated that B_{12} deficiency screening rates were variable and provider-dependent. In Utah, over 191,000 adults have been diagnosed with diabetes. There are disparities in diabetes prevalence with certain racial and ethnic groups: American Indian/Alaskan Native (18.9%), followed by Native Hawaiian/ Pacific Islander (16.9%), non-Hispanic Black (13.6%), all non-Hispanic White (7.8%), and Asian (6.9%). B_{12} deficiency is frequently overlooked because the insufficiency is predominately asymptomatic. Furthermore, inconsistent screenings of metformin-induced B_{12} deficiency lead to variable health outcomes and increased costs of superfluous medications and treatments for an undiagnosed B_{12} deficiency.

Approach/Methods: The Johns Hopkins Nursing Evidence-Based Practice model provides a framework for this project to develop a CPG and address the gaps of care in the clinical setting for metformin-induced vitamin B_{12} deficiency. A review of current practices will be assessed by a clinician survey and a retrospective chart review before implementing a CPG that includes screening for vitamin B_{12} in individuals prescribed metformin. A CPG was developed using the evidence and clinician expertise, integrating ADA recommendations and an evaluation and individualized treatment plan. Clinicians will receive training on the CPG prior to incorporation into an electronic health record. The PDSA cycle will be used for continuous improvement processes of the CPG. Data collected over twelve weeks will monitor the frequency and missed opportunities of vitamin B_{12} screenings. The data from weekly chart reviews will be shared with stakeholders, and rapid cycle changes will be made as needed. Clinician feasibility, usability, and satisfaction of the CPG will be assessed three months post-CPG implementation. Discussions and interviews will be summarized and analyzed to identify descriptions of experience. Quantitative data will be analyzed and summarized using descriptive statistics.

Assessment Findings/Outcome Achieved: An executive summary that includes the evidence-based CPG inclusive of metformin-induced vitamin B_{12} deficiency screenings and project findings will be developed and presented to clinic leadership and clinicians.

Conclusion: An evidence-based CPG ensures patients receive appropriate treatment and care, and it can be reasonably presumed that the CPG will increase patient screening rates, improving patient outcomes and treating metformin-induced vitamin B_{12} deficiency.

Nursing Dietary Intake and Continuous Blood Glucose Measurement

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Background: Nursing night shift work is essential in the hospital yet is linked to negative outcomes such as chronic fatigue and cardiometabolic illnesses such as type 2 diabetes. Short-term studies (days) of simulated night shift work have identified night-time decreases in insulin sensitivity and glucose tolerance as potential causes of negative cardiometabolic health outcomes. However, the long-term effect of regular night shift work on glucose regulation among nurses remains unknown.

Purpose: To determine whether night shift nurses have altered glucose levels and dietary intake compared to day shift nurses.

Methods/Approach: Nurses regularly working full time 12-hour night shifts (n=12), or full time 12-hour day shifts (n = 9) completed the study. All nurses were recruited from a hospital and were involved in direct patient care. During the 6-day study period, all nurses worked the first 3 days, followed by 3 days off. A continuous blood glucose monitor was utilized. Participants reported all food and beverages consumed using the Automated Self-Administered 24-hour dietary assessment tool. Glucose and dietary intakes were averaged over the total 6-days of the study; 3 days on-shift, and 3-days off shift. Independent t-tests were conducted using SPSS to determine group differences.

Results: No significant differences were found between day and night shift for average glucose levels during the 6-day period (115.8mg/dL v. 113.4mg/dL), on-shift days (115.9mg/dL v. 111.12mg/dL), or off-shift days (115.7mg/dL v. 115.6mg/dL). Of clinical significance, night shift nurses spent more time with glucose ≥ 140mg/dL (day = 136.2 minutes/day, night = 169 minutes/day) and had higher variability over the 6-day period. No significant differences were detected in dietary intakes, although several clinically significant differences were detected. Night versus day shift nurses reported lower caloric intake while on-shift, (1752.5 vs. 2129.4kcals, p = 0.073) yet more while off-shift (2266 vs. 2021.7kcals, p = 0.421). Sodium intake exceeded recommended daily intake of ≤ 2,300mg per day in both groups yet was highest in night shift (day = 3383.9mg, night = 3796.8mg). Additionally, average fiber intake was lower than recommendedations of 25g in both groups (day = 16.2g, night = 17.5g).

Conclusion: Results should be interpreted with caution due to the small sample size. However, night shift nurses in our sample consumed less calories while on-shift, more calories while off-shift, and had higher sodium intake versus day shift. Additionally, our preliminary evidence indicates that night shift nurses experience greater glucose variability and spend more time in higher glucose ranges compared to day shift nurses. Future work is needed with larger sample sizes to verify findings.

Implications for Practice: Per our findings, dietary interventions may be needed to decrease sodium and increase fiber intake among nurses to reduce risk for cardiometabolic illnesses. Additionally, despite lower caloric intake when on-shift, night shift nurses spent more time on average than day shift nurses with glucose ≥ 140mg/dL, increasing risk for type 2 diabetes. Nurses, particularly when working night shift, should work closely with medical professionals to monitor blood glucose trends and take actions to prevent cardiometabolic illness like type 2 diabetes.

Funding: Allen Foundation

Recruitment & Engagement of Emerging Adults with Type 1 Diabetes for a Peer Support Trial

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Purpose: To describe the feasibility of recruiting and engaging emerging adults, ages 18-30, with type 1 diabetes (T1D) in a peer support randomized control trial.
Background: Emerging adults with T1D undergo transitions that necessitate a strong social support system. The Diabetes Connecting Online Peers to Enhance Support (D-COPES) intervention was designed by multidisciplinary researchers and a community advisory board of people with T1D. D-COPES is a 12-week intervention with 1-hour biweekly sessions and text messaging on opposite weeks led by peer connectors living with T1D. Participants were asked to choose from a list of diabetes-related topics to discuss at each meeting.
Methods: Recruitment was done in two rounds. Potential participants were recruited through an electronic data warehouse at the University of Utah Hospital and Clinics, social media posts, and through providers and flyers at diabetes and primary care clinics. An opt-out email was sent explaining the study with a study screener QR code and weblink. Participants were contacted twice via text message after a 4-day waiting period. Study data were collected via REDCap surveys and home A1c kits at baseline, 12 and 24 weeks. Once baseline questionnaires were collected, participants were randomized 1:2 into control or intervention groups. Control group participants were given diabetes resource handouts. Intervention participants were matched into groups of 6 with a peer connector for the D-COPES intervention.
Outcomes Achieved: During an 8-month recruiting phase 1,413 recruiting emails were sent and 162 potential participants were screened. Of these, 153 (94.4%) were eligible, 113 (69.8%) consented, and 89 participants completed baseline questionnaires and were randomized (33 control, 56 intervention) with 24 lost to contact or did not complete baseline questionnaires. Participants' average age was 24 years (SD 3.3, range 18 - 30) and the majority were female (61.8%), White (94.4%), and resided in a suburban setting (57.3%), with 10.1% identifying as Hispanic/Latino and 28% identifying as queer. T1D duration was 13 years (range 1 – 28). Most used continuous glucose monitors (83.1%) and insulin pumps (76.4%). 68.5% of participants completed 12-week questionnaires with 76.4% completing baseline A1C and 59.6% completing 12-week A1C. There were no significant baseline demographic or feasibility differences between control and intervention groups. Of the 56 participants randomized to the intervention group, 17 (30.4%) did not attend any sessions, 39 (69.6%) attended at least one session, and 30 (53.7%) attended 4-6 sessions. Completion of home A1c kits was a challenge in this age group and will be discussed. Although reminders were given via text message, email, and phone calls, and monetary incentives increased at 12 weeks and 24 weeks, A1c kits were still not completed.
Conclusions/Implications for Next Steps: Similar to other studies, recruitment and engagement of emerging adults is challenging, despite the CAB's confidence that D-COPES would have high engagement. New strategies are currently being implemented in a third round of this RCT (possibly including: e.g. monthly newsletters with study updates, spreading out control group resources, and a participant-created short video explaining why participation in all aspects of data collection/intervention is important).

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DIABETES

S.U.G.A.R©: An Inpatient Hypoglycemia Response Process Improvement

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Purpose: The Diabetes Education team at a Trauma 1 hospital in the Mountain West identified a need to improve hypoglycemic event response times on medical-surgical units. The clinical question posed was: Do nursing staff understand the roles and responsibilities expected when patients experience hypoglycemia during hospitalization? This evidence-based process improvement project addressed a nurse-driven intervention for responding to inpatient hypoglycemic events in a more timely manner.

Background: Hypoglycemia is defined as blood glucose below 70 mg/dL and increases the risk of negative outcomes in patient care. Increased mortality risk, arrythmias, sudden cardiac death, and prolonged QT intervals are all risk factors associated with hypoglycemia. Severe hypoglycemia experienced while inpatient can negatively affect facility operations by increasing medical costs up to 39% and increasing length of stay by up to 3 days (Pratiwi, 2020).

A literature review found that the use of timers was effective in improving hypoglycemia treatment times. Using timers allowed nursing staff to manage and prioritize their time appropriately. Nursing staff can accomplish other tasks with patient care until the appropriate time to reassess and perform another blood glucose check (Destree, 2017).

Methods: A pilot program was implemented on selected medical-surgical units at a single trauma 1 hospital to improve the response and treatment of hypoglycemia. The team developed an easy-to-memorize acronym called SUGAR©: Safety, Unit response, Gather intervention, Administer intervention, Recheck blood glucose level 15 minutes after intervention. The pilot supported the existing standard, clarified the roles and expectations of inpatient hypoglycemia treatment, and utilized timed reminders on communication devices to reduce nurse reliance upon memory to follow up after an event. The entire process was expected to be completed in under 30 minutes.

Assessment of Findings: Data was collected monthly on the number of hypoglycemic events that occurred and the ones treated to standard were determined through a digital database. Evaluation of the data showed marked improvement in responding to hypoglycemia. The project team searched for existing resources for a timing system, and it was discovered that staff already utilized a communication device that had the capability to set reminders for multiple individuals. This eliminated any cost needed for this pilot program.

Conclusion: Hypoglycemia should be recognized, treated urgently, and appropriately reassessed by rechecking blood glucose levels 15 minutes after treatment. Improving hypoglycemia response increases patient safety and lowers the cost of operation for a facility. All units that participated in the pilot program showed marked improvement. These results demonstrate that the education and tools provided empower nursing staff to treat hypoglycemia efficiently and promote high-quality care with increased optimization of blood glucose management.

The results of this pilot were presented to stakeholders and received support to incorporate this process improvement throughout all facilities in the corporation. Based on the initial success of this pilot, staff should be educated on resources and tools that support consistent response to hypoglycemic events, including the acronym “SUGAR” and integration of timers for recheck. Future evaluation of implementation should be performed for continual optimization of the process.

The Effects of Intermittent Fasting 16:8 in Adults with Prediabetes

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Background: Diabetes Mellitus is the leading cause of renal failure, heart attack, stroke, blindness in adults, and lower extremity amputations. The number of people diagnosed with DM has doubled in the last two decades. Studies have shown that early intervention and lifestyle modifications are effective strategies to reverse high glucose; intermittent fasting is one such novel strategy with numerous benefits, including reversing higher average blood glucose levels.

Purpose: This project aims to use translational research to determine the effects of intermittent fasting 16:8 for 8-12 weeks in individuals with prediabetes.

Methods: Convenience sampling will be used to identify potential participants in a healthcare clinic in the King County area of the Pacific Northwest. A message will be sent via the patient portal to invite individuals diagnosed with prediabetes six months prior to initiation of the study to participate in the project. The initial survey will evaluate participant willingness to utilize intermittent fasting to treat prediabetes. Demographic data, including age, gender, ethnicity, BMI, waist circumference, blood pressure, and family history of diabetes, will also be collected in the initial survey. An initial one-time educational session regarding intermittent fasting will be provided. Thereafter, participant support will be provided via the EMR patient portal and texts throughout the project. The participants will be asked to provide information on their consistency and struggle with intermittent fasting, including side effects and perception of efficacy. Fasting blood sugar will be measured at zero, four, eight, and or 12 weeks for all the participants. Hemoglobin A1c levels will be collected on eligible participants as well.

Findings: Quantitative data analysis with repeated measures of ANOVA and SPSS for statistical analysis will be utilized to evaluate the effectiveness of Intermittent Fasting.

Keywords: intermittent fasting 16:8 and prediabetes, novel diet strategy, prevention of diabetes mellitus in adults

A Digital Health Activity Trial in Caregiving Partners of Persons with Heart Failure

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Aim: To examine perspectives on a 1-week trial of a digital health physical activity (PA) program among older family care partners (FCPs) of persons with heart failure (HF)

Background: Persons with HF have unique care needs due to variable disease trajectories, symptom exacerbations, and complex therapies. Faced with the management of HF, FCPs of patients with HF (HF-FCPs) can experience significant physical, psychological, and social health issues. Importantly, older (≥60 yrs.) HF-FCPs are more vulnerable to health issues due to their age-related health needs and less emotional and social support due to their isolation in the home. To address these issues, we developed a tailored digital health PA program, *TPA4You*. *TPA4You* integrates four components: video-conferencing (i.e., Zoom); a health coach; wearable sensor (i.e., Fitbit); and motivational messaging, in a single package.

Methods: We used a qualitative descriptive method through one-on-one, semi-structured exit interviews after a 1-week *TPA4You* trial, conducted between January and April 2023. For the trial, three PA sessions (60 min each) were offered by a health coach via Zoom, tailored motivational messages were sent via email every other day, and heart rate and step counts monitored using the Fitbit. Participants who completed at least 2 PA sessions in the 1-week trial were invited to the exit interviews within a week of the last session. The qualitative data were analyzed using thematic analysis.

Findings: Participants (N=11) were aged 68.2 ±7.1yrs. (M±SD) and predominantly female (91%), non-Hispanic White (91%), and a spouse (82%). Ten participants completed all 3 PA sessions and the exit interview. Older HF-FCPs perceived that *TPA4You* enabled them to have an opportunity to spend time dedicated to their health and wellness by paying more attention to their needs. They reported that *TPA4You* helped improve their physical and mental health by alleviating caregiving stress. They realized that prioritizing caring for their own health leads to improvement in providing care to the patient with HF. Motivating factors of engaging in *TPA4You* were accountability, trust in the health coach, personalized PA sessions, delivery by video-conferencing, raising daily PA awareness through the Fitbit, and increased confidence for PA. They perceived that the most valuable components of *TPA4You* were relationship with a health coach, support and encouragement from the coach, and motivational messages. Conversely, participants reported some challenges during the trial: scheduling of three PA sessions per week, time commitment, and the non-personalized content and unclear system of motivational messages.

Conclusions: Older HF-FCPs tend to put self-care aside but this could be changed with relevant attention, support, and encouragement to make behavior changes to improve their physical and psychosocial health. Our findings demonstrated that the *TPA4You* program met older HF-FCPs' needs to improve their health through PA; however, some key features need improvement. As the next steps, further studies are needed to modify the content and delivery system of motivational messaging to be more personalized, usable, and acceptable. Moreover, challenges in scheduling three sessions per week should be addressed in future trials.

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Evaluation of the Implementation of the Virtual Nurse Role on Two Acute Care Units

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Purpose: The goal of this program evaluation is to assess the effectiveness of the implementation of the virtual registered nurse (VRN) role on safety and quality metrics, patient satisfaction, nurse acceptance and workload perception on two acute care medical-surgical units.

Background: Demanding nurse workloads are implicated with adverse patient outcomes, burnout, and nurse attrition. The VRN is a new care team role being piloted as part of a larger hospital initiative to reduce nurse workload, turnover rates, and costs of care. Telehealth nursing is well-established in the ambulatory setting. VRN roles are emerging as a promising addition to the acute care team featuring registered nurses (RN) who, in this project, use specially installed cameras and the patient's hospital room television screen for various care activities including admissions and discharges.

Approach/Methods: In a time-series design, baseline data was initially gathered, followed by quarterly data collection involving patient interviews, Press-Ganey satisfaction scores, and staff feedback acquired through focus groups, diaries, and surveys, including the utilization of a validated scale to assess workload perception. Evaluators utilized the Center for Disease Control and Prevention program evaluation framework. Weekly safety and quality measures, and monthly VRN utilization rates were monitored by a quality improvement team.

Outcomes: In May 2023, the VRN role was implemented on a neuro-ortho unit with a year-over-year RN turnover rate of 35.71%. Three months later, in August 2023, the VRN role expanded to a medical-oncology unit with a 6-month turnover rate of 29.7%. VRNs performed admissions and discharges on both units. Initial 3-month benchmark safety and quality quantitative metrics such as falls, CLABSI and CAUTI rates were unchanged. Thematic analysis revealed patient reports of VRN interactions as 'weird,' 'overwhelming', 'kind of cool,' and 'easy'. Six out of ten patients reported being groggy during VRN introduction and eight out of ten did not understand the rationale for a VRN role. Press Ganey scores demonstrated a 39.43% gain in understanding medication purposes (n=21), 19.21% gain in understanding new medications (n=19), and 13.49% gain in understanding medication side-effects (n=18). From mid-August to mid-September, VRNs performed 53% of 232 admissions and assisted with 48.8% of 254 discharges; nurses reported coordination delays with VRNs during discharges. The initial post-implementation data collection measuring nurse acceptance and workload has been delayed but is planned to occur November 2023.

Conclusions: Preliminary evaluation has revealed stable safety and quality measures, and areas for improvement such as patient introductions to VRNs and the importance of providing communication when patients are not sedated. Efficient communication between in-person nursing staff and VRNs is important for acceptance and utilization of the VRN role. Patient satisfaction surveys indicate that the VRN role has already shown positive effects on patient understanding of discharge instructions and medication guidance. In addition to staff acceptance and workload measures, evaluators plan to measure nursing staff retention rates 6-months post project implementation, in February 2024.

DIGITAL HEALTH / E-HEALTH / M-HEALTH

Implementing a Standardized Discharge Process: A Quality Improvement Project

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Purposes/Aims: The purpose of this project is to improve patients' understanding of their discharge education and instructions, as well as readmission rates, through a standardized discharge process that will allow individualization of necessary discharge materials for each patient. Poor patient understanding of their discharge instructions can lead to adverse events, hospital readmission, or increased use of the emergency department (ED).

Rationale/Background: Despite ongoing efforts nationally and locally, many patients continue to show poor understanding of their care and education at hospital discharge. Though 91% of patients answered "yes," they were given information in writing about what symptoms of health problems to watch for after leaving the hospital, only 52% of patients strongly agreed they understood their care at discharge on the most recent Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey results at Central Washington Hospital (CWH).

Best Practice/Methods: Research has shown that having a standardized discharge process improves patients' understanding of discharge instructions and ensures that staff are completing all necessary steps of the discharge process. Specific topics to address at discharge include a review of the disease, relevant test results, follow-up care, instructions for care at home, medication review, signs and symptoms to monitor, and contact information for questions and emergencies specific to each patient's situation. To standardize the discharge process and ensure all patients are being educated on important points of discharge instruction, several studies have successfully utilized a discharge checklist, which provides documentation of evidence-based measures and relieves the stress on healthcare providers to remember each step of the discharge process. A standardized discharge process was implemented on the Surgical Orthopedics Unit (SOU) at Central Washington Hospital (CWH) using the Iowa Model of Evidence-Based Practice and Orem's Self-Care Deficit Nursing Theory as guiding principles. The process was implemented using a nurse discharge checklist built into the Epic EHR. As discussed above, the checklist includes the necessary topics to address and hospital policy requirements.

Assessment of Findings/Outcomes Achieved: Data will be finalized in February 2024. Data collection includes the reporting of checklist usage rates from the Epic team at CWH and the evaluation of HCAHPS survey scores gathered by the Care Excellence team at CWH. The planned outcome evaluation will include the rate of checklist usage on the unit, analysis of SOU-specific HCAHPS scores related to discharge compared to pre-intervention scores, and readmission rates specific to the unit.

Conclusions: Based on the success and outcomes of this project, the recommendation would be to implement the checklist hospital-wide to improve patient understanding of their discharge instructions and prevent readmissions or other adverse outcomes throughout the hospital.

Organizational Readiness for Task Sharing of Tele-Mental Health Intervention

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Background: In the United States of America (USA), primary care clinics are often the first location to screen, identify, and manage mental health concerns. To address the challenges of managing mental illness, in some settings, behavioral health is integrated into primary care (behavioral health integration; BHI), a model which has shown positive impact on patient outcomes and cost-effectiveness. Task sharing is an implementation strategy to address shortages in Behavioral/Mental Health (BMH) specialists and may be utilized in the BHI model. The addition of technology to manage behavioral mental health conditions, or tele-mental health (TMH) can add additional complexity. Although integrated care with task sharing and TMH interventions have many proponents, health care professionals' perceptions on their organizations' readiness to implement the innovation still needs further research. Thus, the goal of this study is to examine perceptions of organizational readiness and implementation climate for task sharing of TMH interventions in primary care between health care professional in varied levels of BHI clinics and between different health care professional roles.

Method: The mixed methods explanatory sequential study focused on organizational readiness as measured by the Organizational Readiness for Implementing Change (ORIC) and implementation climate as measured by the Implementation Climate Scale (ICS) for task sharing of TMH interventions in primary care. The study then used qualitative data to explain the results of the surveys. Qualitative data was coded with Consolidated Framework for Implementation Research (CFIR) and analyzed with Dedoose® Descriptor to Code Analysis.

Results: The study found that the healthcare providers from clinics that had behavioral and mental health services integrated with primary care perceived their organization as ready to implement change for task sharing of TMH interventions and had an implementation climate more supportive for evidence-based practice. This can be reflected in the qualitative data where those in BHI clinics were positive about implementation. The organizational readiness and implementation climate was not statistically different based on the health care professional role of Behavioral Mental Health (BMH) specialists, Primary Care Providers (PCP), and Nurses, who can be considered Frontline Staff (FLS), for implementing task sharing of TMH interventions. From the qualitative component of the study, the BMH specialists, PCPs, and FLS from BHI primary care clinics were all positive about the innovation with the most often coded CFIR constructs of Available Resources, Network & Communications, and Compatibility applied to the qualitative data.

Conclusion: This study investigated organizational readiness and implementation climate for task sharing of TMH interventions. Health care professionals perceived their organization as ready to change to implement task sharing of TMH interventions especially if they were from BHI primary care clinics. As mental health concerns increase and more care will be provided in primary care, primary care clinics need to be organizationally ready and equipped to handle such demands especially given the evidence that PCPs end up providing more mental health services in BHI clinics versus those without BHI.

Staff Views on Social Needs Screening: A Social Determination Perspective

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Purpose: To evaluate staff attitudes and beliefs regarding implementation of a new process for universally screening patients' for their social needs in an urban women's and children's obstetrical care outpatient clinic.

Background: Healthcare is rapidly adopting methods for screening and addressing patients' social needs (e.g., for food, housing, transportation). Solutions to screening are frequently being designed as an electronic, automatic, or self-input screening method in the patient's medical record; yet little research has been done on the effect of this process on staff workload, staff perceptions on engagement of the patient, and their beliefs of importance to their patients. Our prior research established methods for assessing unmet social needs in clinical environments using existing low-cost technology (Epic and REDCap) to refer patients to Utah 211. This research demonstrated that patients will complete screenings if they believe screening is universal, they are in *a trusting environment, and screening is being done by an authentic and caring individual*, And importantly, we have learned that clinicians often selectively screen based on feelings that screening should only be conducted with patients most at risk for having needs and that screening results are often not used and may not useful to clinician or patients.

Implementation: Social needs screening was facilitated by MyChart using the SINCERE Screening tool. An electronic prompt to complete the 10 item validated social needs screener was delivered to patients at two points in time: 1 week prior to their first clinic visit and 6-weeks post partum. After completion of the screener for social needs, patients consent to be referred to Utah 211 information specialists. Clinic staff were trained to follow up with patient at each visit to assure screening is complete, and if not, complete screening during the clinical visit and gather permission to an electronic referral to 211.

Methods: Based on our preliminary findings suggesting that self-determination theory may uncover important mechanisms influencing clinician engagement in social needs screening, a s14-item staff survey was adapted from validated questionnaires made available through Ryan and Deci's Self-Determination Theory work. Specifically, the questionnaire assesses for staff perceived competence, relatedness, and autonomy in the process of screening for, reinforcing the importance of, and facilitating follow-up for patients social needs. The questionnaire was refined and pilot tested through iterative feedback with health system leaders and among expert co-investigators and will be delievered to approximately 100 staff members in fall 2023.

Evaluation: Results will be compiled; descriptive statistics will be stratified by clinical role and demographics, and compared to previous research in other settings.

Findings: Additional findings will be the implications of social needs screening on on staff workload, attitudes and, beliefs.

Conclusions: This project will offer insight into a MyChart app implementation which screens and refers for social needs, as well as evaluate this implementation on clinic staff workload, attitudes, and beliefs.

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The Development of mHealth App Usability Scale for Older Adults with Chronic Diseases

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Background: Chronic diseases are one of the leading causes of disability and death in people over 60 years of age. Mobile health apps have the potential to revolutionize healthcare delivery, managing chronic conditions, and reducing healthcare costs. Unfortunately, many of these apps are not designed for elderly patients who suffer from chronic diseases. Therefore, it is crucial to create a reliable and specialized tool that developers and researchers can use to assess the usability of mHealth apps specifically for elderly patients.
Objective: To develop and validate a mHealth application usability evaluation scale for elderly patients with chronic diseases.
Methods: From March to September 2022, we formed the first edition of the scale through literature review, interview, team discussion, and the Delphi method. Between October and December 2022, the improved scale after a pilot test was used for surveys to analyze and screen items using Item Discrimination Index, Correlation coefficient, Internal consistency test, and exploratory factor analysis in Guangzhou, Guangdong, China. From October 2022 to February 2023, we completed the data collection and evaluation for the reliability and validity of the scale.
Results: The finalized scale includes 6 dimensions and a total of 23 items. Item-level content validity indices and an average scale content validity index ranged from 0.85 to 1. The validation evaluation showed that the scale has a good fit, with a $\chi 2$/df ratio of 1.728 and various fit indices ranging from 0.817 to 0.928. The AVE and CR values also meet the recommended criteria, with a value greater than 0.4 and 0.6 respectively. Additionally, Cronbach's α coefficient for the full scale and subscales ranged from 0.758 to 0.911, indicating good internal consistency.
Conclusions: The MHealth application usability evaluation scale for elderly patients with chronic disease is developed with rigorous steps, showing good reliability and validity, which can be used to evaluate the usability of mHealth among the target audience and promote the age-appropriateness of mHealth.

"Through Alzheimer's Eyes": Feasibility and Acceptability Study Protocol

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This presentation will outline the intervention protocol for: "Through Alzheimer's Eyes". The protocol describes the theoretical rationale, study design, and methods of a novel technologically enhanced psychoeducational skill-building intervention for caregivers of people with dementia that incorporated a virtual reality component. This program involved a 4-week, single-arm, pre-post test pilot study consisting of four 90-minute videoconference sessions. These sessions included a weekly virtual reality experience, allowing the participant to see through the eyes of a person with memory challenges. The 4 sessions covered the skill-training topics of communication, managing challenging behaviors and unhelpful thoughts, the importance of self-care, and mindfulness. All these key topics aimed at reducing stress and distress in family caregivers. The intervention materials and sessions were guided by the principles of the social cognitive theory (SCT) given its relevance regarding learning in a social environment and cognitive behavioral therapy (CBT) which acts as a model to help caregivers develop and master appropriate skills. Several of the intervention's components were drawn from prior successful caregiver intervention studies rooted in these theories (e.g., Coping with Caregiving, REACH I & II).

To assess feasibility and acceptability, we examined recruitment strategies, participant retention, adherence to the intervention, and gathered participant feedback through post-intervention satisfaction surveys and one-on-one qualitative interviews. The study blended elements of quantitative and qualitative research approaches to gain a deeper understanding of the experimental intervention. Data analysis followed an embedded design approach, combining quantitative and qualitative methods. Qualitative analysis used directed content analysis following the coding guidelines of Miles, Huberman, and Saldaña, while quantitative analysis assessed pre-post intervention changes in caregiving outcomes using validated surveys and t-tests.

The intervention yielded strong feasibility and acceptability results. Participants (n=20) found that the VR experience was eye-opening, impactful, and provided an opportunity to better understand Alzheimer's disease from the perspective of their loved one. Moreover, the intervention was useful, enjoyable, technically easy, and highly recommended. Participants expressed a desire for more VR experiences and involvement of other family members in future interventions. Quantitative results demonstrated significant improvements in communication, relationship quality, and caregiving preparedness.

By sharing the characteristics of new training and related resources, we aim to promote affordable resources and training for healthy aging in place for people with dementia and their family caregiver. Additionally, we emphasize the importance of interdisciplinary education and practice to support caregivers. The rationale and characteristics of our intervention contribute to raising awareness about the complexities of caregiving and offer new ways to assist family members. By incorporating virtual reality and delivering the intervention online, we hope to reduce the challenges faced by caregivers, enabling them to provide better care for their loved ones while ensuring their own needs are met and ultimately reducing avoidable healthcare concerns. Lessons learned from this experience will help identify and refine interventions to meet the needs of family caregivers.

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Exploring Knowledge, Attitudes, and Beliefs of Sustainability in Nursing Education

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Purposes/Aims: The purpose of this project is to examine faculty knowledge, attitudes, and beliefs related to sustainability concepts in nursing education.

Rationale/Background: The adoption of planetary health and climate change for education, research, and practice have been identified as priorities for nursing and other healthcare leaders. Researchers have noted that improving the quality of healthcare systems is essential (Kalogirou et al., 2020 & Leffers et al., 2017). It has been well-documented that nursing students have positive attitudes toward the integration of sustainability concepts, specifically climate change, in nursing education (Alvareze-Nieto et al., 2022). In 2021, the American Association of Colleges of Nursing (AACN) included climate science as a “value” of a successful liberal education. Based on this factor, a survey was developed in 2022 and was administered to faculty teaching in a College of Nursing at a large Academic Health Science Campus. The aim was to better understand if nursing courses across the curricula included concepts of sustainability as defined by the University Sustainability Education Advisory Committee. The authors found that several courses included sustainability concepts and half of the surveys returned met the University criteria to earn a sustainability course designation. To support faculty incorporating sustainability concepts throughout the curriculum, the authors aim to better understand the knowledge, attitudes, and beliefs of faculty and students related to sustainability concepts. The authors plan to distribute a survey to students and faculty in January 2024.

Methods: The authors plan to gather both quantitative and qualitative data and will use the Sustainability Attitudes in Nursing Survey (SANS_2) for both students and faculty. The validated survey has five questions and is available in a variety of languages including English. Analysis of the data will be performed using Excel.

Conclusions: Incorporating sustainability concepts into nursing education is essential. The authors will use the survey results to determine faculty and student knowledge, attitudes, and beliefs about sustainability. Findings will be disseminated in an appropriate nursing journal as well as in presentation format.

Identifying the Gaps in Teaching about Social Determinants of Health

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Purpose/Aim: This project aimed to enhance the preparedness of psychiatric nurse practitioner students in working with unmet social needs and health equity via formative simulation training. The pilot simulation served two main objectives. Firstly, to assess whether students can effectively identify hidden unmet social needs when interacting with standardized patients within the simulation encounter. Secondly, it aimed to pinpoint gaps in our current curriculum regarding training and student competencies in addressing social determinants of health (SDOH).

Background: SDoH contribute to more than 75% of our patients' health outcomes. Nurses traditionally address these issues through formal screening and community referrals but there is a noticeable gap in nursing education to translate these competencies to our courses. Curricula primarily focus on theoretical applications and population-level data regarding SDOH, with limited opportunities for nursing students to practice addressing unmet social needs in a safe learning environment.

Method: Nine psychiatric nurse practitioner students (n=9) participated in a 2-hour formative simulation experience. Students were prompted to conduct the "subjective" portion of a psychiatric intake with standardized patients, with a provider observing the encounter. All standardized patients were trained on a script with hidden unmet social needs. Our assessment focused on the student's ability to identify and work with these unmet social needs (i.e., approach, knowledge) and the strategies employed with interpersonal interviewing skills. Intake sessions lasted 45 minutes and was followed by a debriefing session, focusing on SDoH and developing therapeutic communication skills for discussing sensitive topics. All interviews and debriefs were recorded and dual-coded for thematic analysis. Data were cross-walked to the American Association of Colleges of Nursing (AACN) domains, comparing the results with the expected competencies to help discern what aspects are being met (or not) in current nursing curricula.

Assessment & Findings: Nursing students had a theoretical grasp of social determinants, aligning with AACN Domain 1 (nursing knowledge). However, students were less proficient in integrating interdisciplinary SDOH knowledge to make ethically sound healthcare decisions, as asked by AACN Domain 2 (person-centered care). There was also a reluctance among to dive deeper into the reasons behind SDOH disparities and barriers, reflecting a gap in AACN Domain 2 understanding. Student readily identified SDOH factors relating to housing insecurity from the script, but there was less knowledge about other domains and the available resources and coordination needs (AACN Domain 7, systems-based practice). Finally, while students demonstrated good intentions in connecting with SPs, the sensitive discussions with patients about their SDOH likely required more accountability and empathy than was demonstrated (AACN Domain 9, professionalism).

Discussion: There are clear implications for AACN domains as we move to competency-based curricula, especially regarding how to use formative experiences to bolster interpersonal communication. The process starts with building personal insight about implicit biases and growing their knowledge in care coordination. The goal of this initiative illustrate how every patient is unique with different unmet needs. The best question we, as nurses, can ask sometimes is – what matter most to this patient right now, and how can I help them?

The Academic Nursing Educators Shortage: Stopping the Leak, Replenishing the Well

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Purpose/Aim: With the nursing shortage plaguing healthcare systems locally and globally, it is critical to identify the reasons why the problem exists and address it strategically from various sectors. Nursing educational institutions represent a critical cluster of stakeholders that play a major role in preparing the future nursing workforce. This goal cannot be met with the steady outflow of academic nurse educators (ANEs). This research aims to explore the reasons that drive the shortage of ANEs and determine how nursing educational institutions can mitigate and strategically resolve such a crisis.

Rationale/Conceptual Basis/Background: The ANE shortage has been cited as a major reason for the markedly decreased capacity to enroll potential students who can join the nursing workforce. This is attributed to insufficient number of available ANEs to teach a growing scale of students desiring a nursing career, and inadequate nursing school and clinical resources. The increase in the number of nursing schools as an attempt to meet the demands for a larger nursing workforce has complicated the problem due to the enhanced competition for available ANEs and clinical practice sites. With nurses placed at the helm of the health care delivery system, a reduced nursing workforce negatively impacts health outcomes and equitable access to healthcare across populations. Nursing educational institutions are at the crux of this burgeoning problem.

Methods: Using a qualitative paradigm, specifically the nominal group technique, 25 nurse educators recruited nationwide participated in discussion forums to brainstorm the ANE shortage. Data were generated to address two research questions, namely, 1) what is the current state of nursing education, and 2) what are the barriers to recruiting and retaining academic nurse educators (ANE)? Responses were organized into various categories or themes, and further discussed and prioritized until the participants arrived at a consensus of recurring themes in response to the research questions.

Assessment of Findings/Outcomes Achieved: The findings include 1) recognizing the specialized education, skills, and knowledge required of ANE within the realm of advanced nursing; 2) standardization of benefits and compensation aligned with those in clinical practice; 3) consistent provision of formal orientation and mentorship for newly hired ANE; 4) promoting awareness and dissemination of available funding to students in nurse educator programs; 5) targeting pedagogically-trained ANEs for faculty positions; 6) motivating faculty to participate in recruitment efforts; 7) nurturing faculty confidence; and 8) valuing the Doctorate in Nursing Education.

Conclusions/Implications: Relevant findings from this study reveal that the shortage of ANEs can be mediated by educational institutions themselves through a solid action plan that leverages the role of ANEs as equal partners in preparing a competent nursing workforce. The action plan can bolster the capacity to meet the demands of healthcare systems and the needs of various patient populations requiring a diversified nursing workforce as more students get admitted in nursing programs because of increased ANE availability. Promotion of health and equity is a natural outcome of an increased nursing workforce that can bridge healthcare gaps across populations.

Keywords: Nursing shortage, educational institutions, action plan, nursing workforce

Preop Education Impacts Dehydration-Related Hospital Readmissions Post Ileostomy

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Purpose: Dehydration is the most common cause of readmissions related to ileostomy surgeries. This can lead to life-threatening complications including electrolyte imbalances and renal failure. At the institution of interest, dehydration related readmission rates have increased by 15% in the past five years. The aim of this study is to prevent dehydration, postoperative complications, and hospital readmissions following ileostomy surgery by implementing preoperative patient education about dehydration, oral intake and ostomy output monitoring, and interventions to address high ostomy output.

Background: Ileostomies are created to allow stool to bypass the colon for a variety of reasons, including protection of an anastomosis site, management of fecal incontinence, suppression of inflammatory bowel diseases, and management of other colon or rectum conditions such as malignancy. Although ileostomy creation is effective in reducing colorectal morbidities, it is related to the highest readmission rates of any colorectal procedure. The most common cause of readmissions related to ileostomy surgeries is dehydration due to its increased loss of fluids and salt within the first few weeks of surgery. Since dehydration is directly related to high ostomy output, it is of utmost importance to monitor fluid intake and ostomy output consistently. Through proper oral intake and stoma output monitoring, early interventions can be initiated to prevent complications of dehydration and electrolyte abnormalities from high ostomy output.

Methods: Using the John Hopkins EBP model, a literature review was conducted and current clinical practice guidelines, including a stringent preoperative educational program before ostomy surgery and follow-up stoma care postoperatively, were evaluated, which found sufficient evidence that standardization of preoperative education and monitoring I&O after ileostomy surgery increases patient awareness of high ostomy output. This early recognition of high ostomy output led to patient-driven interventions such as increasing oral intake and taking over-the-counter medications to prevent dehydration progression and related complications. Utilizing the evidence and in partnership with the institution’s colorectal surgeons, standardized preoperative education and an I&O tracking form were developed. The outpatient colorectal surgery nurse navigators were educated on delivering this education to all patients during their preoperative appointment. A voluntary Qualtrics survey will be disseminated to every adult patient who undergoes ileostomy surgery and presents for their first postoperative visit. The survey will be accessed via a QR code or a direct link and will be available in both English and Spanish languages. The survey will evaluate patients’ utilization of dehydration and high ostomy output education, frequency of I&O monitoring, and overall satisfaction. Pre- and post-intervention survey results will be compared to assess the effectiveness of the quality improvement project. Hospital readmission rates will also be analyzed 3 months pre- and 3 months post-intervention to evaluate the impact on readmission rates within 30 days of initial discharge.

Results: In progress. Survey results regarding patient education utilization, I&O monitoring frequency, and satisfaction as well as 30-day hospital readmission rates will be analyzed pre- and post-intervention. Inferential statistics may be used to determine statistical significance, if indicated.

Conclusion: In progress.

Flow in Digital Game-Based Learning: A Concept Analysis

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Aims and Objectives: This abstract explores and clarifies the concept of flow in digital game-based learning using Rodgers Evolutionary Concept Analysis framework.

Background: Digital game-based learning (DGBL) is an active learning method that promotes adaptive problem-solving and critical learning, thus better matching the cognitive and critical thinking skills required for current nursing practice. Digital serious games (DSGs) are one application within DGBL with the primary goal of education in a gameplay context. DSGs provide an immersive, interactive environment with immediate feedback while encouraging active and reflective learning. Their most oft-cited benefit over traditional teaching formats is their ability to intrinsically motivate and engage the learner– a process facilitated by experiencing a ‘flow state’. Csikszentmihalyi’s Flow Theory has been heavily researched in education, business, leisure, and other goal-oriented activities to describe optimal engagement and performance of individuals. However, the discussion of flow as a theory or concept in DGBL is largely absent from nursing. Being a fundamental driver of intrinsic motivation and self-directed learning found in DSGs, it is important to understand the elements necessary for the facilitation of a flow state in nursing students. This article aims to explore and clarify the concept flow and discuss its translation and application to nursing DSG design.

Method: This analysis was conducted using a modified version of Rodger’s process. Literature searches were conducted using PubMed, CINHAL, Web of Science, and Google Scholar, with a timeline from January 2012 to December 2022. Due to the absence of flow in the nursing literature, DSGs and video game articles were included in the analysis from various disciplines that discussed flow.

Relevance: The clarification of the concept of flow within DGBL offers a working approach to development considerations in nursing game design to promote student satisfaction, engagement, and increased time spent with learning material. Thus, this paper seeks to clarify an overlooked but critical aspect of how to facilitate optimal learner experience in digital game pedagogical design through a nursing lens.

Conclusion: The attributes of a flow state are (1) a complete absorption/engagement/immersion in action, (2) autotelic experience (intrinsically rewarding), (3) a sense of control, (4) real-world dissociation/time distortion, (5) optimal psychological state/functioning. Antecedents to flow are (1) presence/immersion (leading to engagement), (2) self-efficacy, (3) skill-challenge balance, (4) clear goals and rules, and (5) performance feedback is available, immediate, and specific. Consequences of a flow state are (1) increased and continued motivation, (2) improved learning outcomes, (3) enjoyment/positive game experience, (4) increased performance and concentration, (5) increased interest in learning, (6) awareness of progressive engagement and growth, (7) continuation of the game cycle. The antecedents, attributes, and consequences were synthesized to develop a conceptual flow model in the context of DSGs. Understanding this concept and how to facilitate learner engagement and motivation is essential to effective DGBL methods in nursing education curricula. Future research should explore how the distinctive user and game characteristics unique to nursing can promote flow in various learner and player styles within DSGs.

EDUCATION

Improving APRN Participation in QI Projects through Multi-Modal Strategies

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Purpose: To increase APRNs (Advanced Practice Registered Nurses) participation in a quality improvement (QI) project utilizing a multi-modal strategy. A QI project was implemented in a neonatal intensive care unit (NICU) to improve APRNs participation in educating parents of hospitalized infants about the importance of human milk (HM) feedings. A convenience sample of APRNs working in the level IV NICU was chosen for this project. Quantitative data was collected, and descriptive statistics were used to analyze the data.

Background: Studies have irrefutably proven HM is the best source of infant nutrition and it protects against infection and necrotizing enterocolitis. HM provides short-and long-term benefits for infants. The NICU's goal was to increase HM feedings at discharge. Educating parents about the importance of HM for their infant was assigned to the APRNs. After the initial project roll-out, APRNs participation in educating families fell from 13% to 0% for several months. An APRN-led QI initiative was implemented to improve APRN participation, and therefore improve infants' outcomes.

Methods: A multi-modal educational approach was used to teach, remind, encourage, and support APRNs' involvement in the unit's goal. The strategy included combined elements of print, visual-images, and one-on-one teaching. The print elements were delivered via written "Talking Points" for APRNs to use. Copies were posted in the work rooms, laminated cards with a QR code were attached to each computer workstation, and the "Talking Points" were uploaded to the APRNs' online document repository easily accessible via an app. Visual-images materials were provided via two live power-point presentations explaining the project, goals, and expectation. Also, a short video starring two APRNs was created, and the link made available to the APRN's Group Me app. In addition, one on one teaching, support, and encouragement was offered by the lead APRN.

Results: Descriptive statistics was used to obtain the results. A total of 55 APRNs at the level IV NICU completed the multi-modal learning. The percentage of APRNs participation increased from 0-14% to 50% in two months. The percentage of infants discharged home on HM continues to be above goal of 80%. The multi-modal strategy showed an overall increase in engagement and participation, indicating success. These results can be disseminated to other hospital units working to improve APRNs participation and engagement in QI initiatives to ultimately improve patient outcomes.

Conclusion: Increased APRNs participation in a QI project to ultimately improve infants' outcomes through use of HM through discharge is possible. The multi-modal teaching strategy proved successful for this project, with an overall increase in engagement and participation. However, despite a significant improvement in APRNs participation in this QI project, continuous reinforcement of the teaching material through different modalities is needed to ensure sustainability of the project and continued improvement.

Environmental Science in Nursing Education

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Purpose/Aims: This project was a program evaluation, to estimate the extent to which environmental health nursing concepts are threaded into a graduate nursing curriculum. The aim was to identify targets for enhancing the curriculum with environmental concepts.

Rationale/Background: Since early beginnings with Florence Nightingale, nurses have recognized the influence of social and environmental factors on health. Four concepts - person, environment, health, and nursing – are collectively considered the metaparadigm for nursing practice (?), with environment defined as internal and external factors affecting a person and their health (Nikfarid, 2018). The environment is everything outside of DNA that affects people and their health (GSLC, 2019), and so represents the context within which we live our lives - traditional aspects of the physical environment (temperature, food, water quality, chemical pollutants), the socio-cultural environment, and even the internal environment or microbiome (CEEHI, 2023). Some term this *exposure health* to emphasize the broad meaning (CEEHI, 2023; Thomson & Schwartz, 2017).

Description of the Undertaking: Course syllabi, course descriptions, and where available the list of course topics, were examined across the University of Utah nursing PhD program and MS/DNP core courses. This was augmented with searches of campus websites. Topics from a dedicated program to teach environmental science concepts to nurses, grounded in the NIEHS translational research framework for environmental health research (Castner, 2020), were used as the exemplar for environmental science concepts. Additional content related to information management in environmental science was added to the MS/DNP core course *Foundations of Health Informatics*.

Findings: Social Determinants of Health concepts and sociocultural environment, appeared in multiple courses. Students in the MS/DNP core Foundations of Health Informatics were qualitatively positive about the added content. Sustainability, defined at the U of U as “the integrated pursuit of social equity, environmental integrity, and economic security” (Bowen, 2023), and an accompanying theme of *environmental justice*, are promoted campus wide, with concept threads beginning to appear in courses. Targets courses for adding environmental content were identified in the PhD curriculum. Environmental theories would fit within the theory course, information about environmental metrics could be added to the measurement course, and public use datasets commonly used in environmental nursing could be leveraged in statistics courses.

Conclusions: Environment (exposures) are part of the metaparadigm for nursing practice and it is important for all nurses to understand environmental health. Actions to overcome environmental health disparities (environmental justice) is an ethical responsibly for nurses (ANHE, n.d.). Environmental nursing and environmental justice concepts can be easily woven into a curriculum even in programs that do not have a dedicated environmental health nursing specialty track.

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Hidden Curriculum in Nursing Education: A Concept Analysis

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Background: "Hidden curriculum" refers to the unspoken and unintentional messages and values conveyed to nursing students through the culture and norms of the educational environment. First adopted into nursing education literature in the 1980s, the concept of hidden curriculum has received relatively little attention from nursing academia since. However, in recent years, nursing educators and researchers have recognized the significant impact hidden curriculum can have on nursing students' learning and professional identity formation. Performing a concept analysis is crucial to better understand the hidden curriculum's effects within nursing education. This background establishes the importance of analyzing hidden curriculum's concepts to grasp its implications for nursing students and educators more fully.

Aim: The purpose of this concept analysis is to examine hidden curriculum in nursing education and develop an up-to-date definition and description of the key elements comprising hidden curriculum. Findings will provide conceptual clarity for both nursing education and research.

Method: Walker and Avant's method of concept analysis was utilized to provide a standardized structure to identify, clarify, and describe hidden curriculum in nursing education. This included defining the antecedents, attributes, consequences, and empirical referents. A comprehensive literature search following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines was used to identify relevant publications from PubMed and CINHAL.

Results: Synthesis of the literature combined with dictionary resulted in a working definition of: The unspoken and often unintentional messages and values conveyed to nursing students through the culture and norms of the educational environment, shaping their attitudes, beliefs, and behaviors as future nurses. Antecedents for this concept include professional socialization, educational environment, and values and culture. Defining attributes emerged as informal nature, power dynamics, mixed messages, and unwritten rules and expectations. Consequences identified in the literature included reinforcement of cultural norms, development of professional identity, impact on learning outcomes, and influence on student psychological safety. Model and alternate cases are presented to demonstrate the concept.

Conclusion: This concept analysis of hidden curriculum in nursing education resulted in a contemporary definition and description of key elements comprising the hidden curriculum. The antecedents, attributes, and consequences uncovered provide clarity on how the hidden curriculum can shape nursing students' professional identity formation and learning outcomes. These findings establish an updated conceptual foundation for future nursing education research and practice focused on understanding and addressing the impacts of hidden curriculum. Additional empirical research is needed to expand knowledge of this phenomenon further. However, this analysis represents an important step in elucidating the hidden curriculum's role within nursing education.

Assessing Nursing Curriculum Using the Planetary Health Report Card

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Purpose/Aims: The project aims to evaluate and grade our College of Nursing program on its integration of Planetary Health concepts.

Rationale/Background: Climate change affects the planet and human health. The consequences of climate change on human health are profound. Nursing is at the forefront of healthcare, and it must be equipped to meet the demands of the changing climate. Nursing education must address the intricate interconnection of the physical interaction of human environmental ecosystems that create the planet's existing health. The existing climate change activity demands efforts to ensure a livable planet that supports human health. In the interest of self-preservation and the health of humanity, there is a critical public health emergency to address planetary health.

The Planetary Health Report Card (PHRC) is a student-led initiative developed by medical students to evaluate and improve planetary health content in medical schools. Nursing students have recently adopted it to assess their school. By integrating planetary health principles into nursing curricula and using a report card to determine their effectiveness, we can ensure that nursing graduates are ready to meet the demands of a changing climate. To date, our nursing program has not been evaluated or has used the PHRC tool. More focus on planetary health education would allow students to apply their knowledge to lead future planetary health initiatives and fill the gaps in our educational curriculum. Nursing students must be educated on planetary health concepts and be equipped to deal with the negative health impacts of climate change.

Methods: Using the PHRC framework, this descriptive study will analyze the Washington State University College of Nursing Program. The report card will assess five domains: curriculum, interdisciplinary research, community outreach and advocacy, support for student-led initiatives, and campus sustainability. Analysis and scoring will be completed by nursing faculty and students. The timeline completion date is March 2024.

Assessment of Findings/Outcomes Achieved: Our research is currently in progress, and we will have the findings by the timeline completion date. We will share our progress with faculty leadership throughout the process. Each PHRC section will receive a letter grade, translating into an overall institution grade.

Conclusion: The findings of the PHRC will provide the next steps for organizational policy and educational practices at the College of Nursing, as well as recommendations for further research.

Applying Benner’s Novice to Expert Model to Bias-Interrupting Skill Acquisition

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Purpose: The purpose of this project was to adapt Benner’s Novice to Expert Model to inform the development of the Implicit Bias Clinical Teaching Program (IBIAS). IBIAS is an evidence-based program that conceptualizes implicit bias among nurses as an urgent patient safety issue. The goals of IBIAS are to prepare future nurses who have developed habits to:

- consider how bias may be impacting the care they provide, and
- implement bias-interrupting skills they have demonstrated throughout their clinical nursing education once they enter the workforce.

Background: Substantial evidence shows that implicit bias among nurses and other health care providers contributes to poor health care experiences and higher levels of morbidity and mortality for numerous marginalized communities. Similar to the acquisition of other skills, developing bias-interrupting skills requires intentional practice over time in different contexts. To our knowledge, no theory or model currently explains the process of bias-interrupting skill acquisition.

Methods: We reviewed key articles that describe the process of developing the Dreyfus Model of Skill Acquisition, Benner’s Novice to Expert Model of Skill Acquisition, and other related materials. We then discussed the relevance of the Novice to Expert Model to the process of developing bias-interrupting skills with Dr. Patricia Benner. Based on Dr. Benner’s feedback, we adapted the Novice to Expert Model and reviewed this draft with Dr. Benner to ensure model adaptation to bias-interrupting skills accurately captured the process of skill acquisition.

Outcomes: We created an adapted version of the Novice to Expert Model to reflect the process of acquiring bias-interrupting skills through the five Model stages: Novice, Advanced Beginner, Competent, Proficient, and Expert. For each stage, we provide examples of the knowledge, skills, and attitudes related to bias-interrupting skills at the relevant stage.

Conclusions: New national calls and requirements, such as the American Association of Colleges of Nursing’s new Essentials, charge nursing education programs to prepare future nurses to address their own biases and mitigate the potential impact on nursing care. Thus, it is important for nursing programs to provide learners and educators with a model of how they can expect to progress in the process of developing bias-interrupting skills.

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Best Practices in Supporting Wellbeing in Diverse Nursing Student Populations

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Purposes/Aims: The purpose of this review was to create best practice recommendations and develop key resources for supporting nursing student success that will have a positive impact on the health, wellness, and success of diverse nursing students.

Rationale/Background: The current United States population of registered nurses does not reflect the diverse populations for whom they provide care. Individuals from diverse cultural backgrounds are likely to experience diminished levels of trust and satisfaction towards healthcare workers who exhibit a lack of understanding of culture or representation which often leads to suboptimal patient care outcomes and overall quality of life. To maintain a diverse nursing workforce and sustain growth, it is essential to identify and allocate resources dedicated to building resilience and enhancing the health and wellness of nursing students.

Brief Description of the Methods: Two sequential literature reviews were conducted using PubMed and CINAHL to identify literature focused on wellbeing of diverse nursing students. The limits for both searches were English language and published between the years of 2013-2023. All article titles were screened for topic relevance. The first search used the following key search terms: underrepresented nursing students, health and wellness, wellbeing, and diverse nursing students yielding 1327 articles. A second search used the key terms of underrepresented undergraduate students, health and wellness, wellbeing, and resources and yielded 284 articles with duplicates removed. A total of 1611 articles were screened for the following inclusion criteria: analysis of specific social determinants of health (SDOH) influencing nursing student success, interventions that influence wellbeing, and resources to increase wellbeing. A total of 16 articles were chosen for full review.

Assessment of Findings and Results: Sixteen articles were included in the literature review: five qualitative studies, three systemic reviews, three cross-sectional studies, two quasi-experimental studies, one prospective cohort study, one scoping review, and one secondary data analysis study. Articles focused on specific student-related stressors, barriers to success in nursing education, and the need to allocate resources to support student success. The literature review suggests student success strategies for general undergraduate and nursing students including cultivating strong support system (N=10), inclusive mentoring (N= 9), and receiving financial support (N= 9) to enhance and maintain student health and wellness. There is minimal literature that addresses specific resources to promote health and wellness in UR nursing students.

Implications: There is an abundance of information on the impact of SDOH on UR diverse nursing student success. However, there is limited literature on specific student support strategies. Identification of current available resources is a priority for supporting nursing students to practice strategies that sustain the health and wellness of the expanding population of diverse registered nurses. Using the six domains of the Kreitzer model of wellbeing (health, relationships, security, purpose, community, and environment) as an organizing framework, the findings from this review will be used to develop a resource guide that focuses on promoting wellbeing in UR nursing students. This resource can be used by faculty, student support professionals, and students to facilitate student success and professional resilience.

Follow-up of a Program to Improve Undergraduate and Graduate Nursing Student Diversity

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Purpose: 190 pre-nursing and nursing students throughout Oregon participated in a Health Resources and Services Administration-funded Nursing Workforce Diversity grant program called *Advancing Health Equity through Student Empowerment & Professional Success* (HealthE STEPS), which was developed to increase nursing workforce diversity during the years 2013-2021. A follow-up study was conducted of the 2013-2016 and 2017-2021 cohorts of HealthE STEPS to 1) determine current educational and employment outcomes for HealthE STEPS Scholars; 2) to identify perceptions of HealthE STEPS Scholars with the HealthE STEPS program and related educational experience; and 3) to identify HealthE STEPS Scholars' interest in further education and the faculty role. Participants were pre-nursing students, pre-licensure students in community college and baccalaureate programs, and graduate students.

Background: While the numbers of nurses from historically underrepresented ethnic and racial populations are increasing in the workforce, the distribution of nurses in the United States and in the West are still not representative of the population. Continued efforts for student recruitment from historically underrepresented ethnic and racial populations into undergraduate and graduate programs and into faculty positions are critical to resolve persistent gaps in diversity in the nursing workforce.

Methods: A two-part descriptive survey was developed in Qualtrics based on the literature and internal stakeholder input. This study was determined by the university Institutional Review Board to not be human research. The first survey asked for contact, educational and employment information, and additional interest in education, teaching, and alumni participation. There was a link to a second anonymous survey that elicited perceptions about factors that contributed to success, benefits of the scholarship program, and experiences in the nursing program. The survey was distributed via email and was open for a month during the early part of 2023. Weekly email reminders were sent. Descriptive summaries of data occurred. Qualitative comments were analyzed using thematic analysis.

Findings: We were able to identify valid emails for 186 of the 190 participants. 88 participants responded to the first survey for a response rate of 47%; 69 or 37% responded to the second survey. 88% of respondents completed their nursing degree with another 8% in progress; 89% were employed in nursing. Participants interested in further information were connected with the appropriate contact. Financial support, program quality, basic security needs being met, and family were the strongest factors identified by the participants as contributing to success. Participants identified that the scholarship benefited them through: feeling empowered, encouraging success, building confidence, and easing financial strain. Negative experiences reported by participants included microaggressions, imposter syndrome, being treated differently, being treated dismissively, and not feeling safe to raise concerns.

Conclusions: HealthE STEPS Scholars experienced similar negative experiences with belonging as seen in the literature. Co-curricular supports can help to overcome some of these negative experiences. It is important not to underestimate the importance of visibly rooting for students through scholarship support and the subsequent impact on their confidence and success.

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Reducing Hospital-Acquired Pressure Injuries in Patients with Darker Pigmented Skin

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Purpose: This quality improvement (QI) project aims to improve the accuracy and effectiveness of skin assessments for patients with darker skin tones in preventing hospital-acquired pressure injuries (HAPIs) by implementing an evidence-based, standardized skin assessment protocol and training program.

Background: Nursing staff play a vital role in preventing HAPIs. Nearly 2.5 million patients develop HAPIs annually in the United States increasing their risk of prolonged hospitalization, increased readmission rates, infections, and severe pain. Preventing HAPIs continues to be a top priority for many acute care facilities. Recent audits at a large urban Pacific Northwest hospital revealed high HAPI rates with a staff nurse knowledge gap regarding skin assessment tools. While the Braden Scale is widely used for skin assessments aimed at preventing HAPIs, it was developed primarily for lighter-skinned populations, leading to inaccuracies in assessing darker skin tones. This disparity in skin assessment practices has serious implications resulting in delayed identification, prevention, and treatment of HAPIs and more severe injuries in individuals with darker skin. Previous research has shown that implementing culturally sensitive care practices, utilizing appropriate assessment tools, and improving communication and collaboration among healthcare teams can help reduce pressure injuries in individuals with darker skin tones.

Methods: This quality improvement project followed the Plan-Do-Study-Act (PDSA) cycle model, beginning with the development of an updated, evidence-based skin assessment protocol. An interdisciplinary committee with wound care specialists, skin care educators, staff development specialists and nursing staff are developing a comprehensive skin assessment protocol that addresses dark-pigmented skin patients' unique needs and challenges. An investigator-developed survey designed to explore nurse perceptions, knowledge, confidence, and beliefs about assessing dark skin tones was conducted electronically. Subsequently, a training program based on those results and the new protocol is being created collaboratively with staff development and skin care specialists using Knowles Best Practices in Adult Education. Nursing staff will receive education on accurately assessing the skin of high-risk individuals, particularly those with darker skin tones. A mixed methods approach will be used to collect quantitative and qualitative data, including HAPI incidence rates and staff knowledge assessments. Quantitative data such as HAPI rates and Likert-scale pre-and post-training nurse survey responses will be analyzed using descriptive statistics. Qualitative survey responses will be analyzed using thematic analysis.

Outcomes: This project is in progress with data analysis and findings dissemination expected by March 2024. HAPIs, the rate of occurrence of pressure injury, is calculated for each hospital unit and the overall facility. There are two types of measures, the prevalence, and incidence of pressure injuries. The prevalence is the percentage of patients with pressure injuries, and the incidence is the percentage of people who developed such a complication after facility admission.

Conclusion: This QI project addresses a critical healthcare disparity by attempting to improve skin assessment practices for individuals with darker skin tones, ultimately reducing HAPIs and promoting equitable care. Successful outcomes may enhance patient safety and reduce HAPIs while addressing disparities in skin assessment among dark-pigmented patients.

Skin Color Representation in Nurse Practitioner Education

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Purpose: To increase the number of images with diverse skin color representations in advanced practice nursing education.

Rationale: Nursing education needs to include images that represent the diversity of the patients they serve as well as the diversity of the students themselves to foster an inclusive environment. Inadequate or inappropriate representation of darker skin types in health education has been referred to as “visual racism”. Racial and ethnic bias is perpetuated when nursing students do not learn to recognize common manifestations in darker-pigmented skin. The National Academies of Sciences and Engineering has highlighted how important nursing is in supporting health equity. Addressing visual racism is a component of addressing bias and the inequities it creates. Work has been done in nursing and other health science education to increase the variation in skin color representation, but is not yet universal.

Methods: Advanced practice nursing students will be surveyed regarding their perceptions of skin color representation. These students will have completed core courses, but not be advanced in their clinic experiences. The survey is one adapted from the literature, that looked at medical students’ perception of skin color representation. Teaching photographs in the pathophysiology, physical assessment, and pharmacology advanced practice courses will be assessed and coded for the diversity of skin color representation utilizing the Fitzpatrick skin phototypes scale. Images that are deemed transition or for entertainment will not be coded. Coding of the photograph will occur with two trained blinded individuals. Training will occur in virtual meetings and emails by the lead(s) of the project team. Discrepancies in the coding will be mediated by a nurse practitioner with clinical expertise in dermatology or a board-certified dermatologist. Feedback on the teaching photographs will be provided to the course leads. In addition to feedback on the teaching materials, they will be provided guidelines and resources for addressing visual racism in teaching materials including electronically accessible university health science library-based HIPPA-compliant resources for additional photographic representations of cutaneous manifestations.

Assessment: Findings will be analyzed using descriptive statistics and will be presented.

Conclusions: While limited in its scope of addressing systemic issues with diversity, equity, and inclusion, ensuring diversity in skin color representation in the advanced practice nursing curriculum is a practical measurable effort in anti-racism. Coding teaching images for dark skin representation can be replicated across clinical courses in nursing and other health science disciplines. These findings will serve as a baseline for future interventions within the institution.

Student Perceptions of Benefits of a Growth Mindset in the First Terms of Nursing School

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Aim: The study aim is using qualitative analysis to determine student perceptions of benefits of practicing a growth mindset in the first terms of nursing school.

Rationale/Background: Growth mindset interventions are reported to benefit academic performance, retention, and wellbeing. However, some studies found no benefit in grades or retention, two outcomes frequently measured. Evidence indicates benefits are most likely in individuals who face challenges, are underrepresented, or have an initially weaker growth mindset. Benefits also depend if the teacher and environment reinforce a growth mindset.

The literature suggests these questions to evaluate benefit: (1) Did participants internalize the growth mindset message? (2) Were positive expectations about potential for success fostered? (3) Were more mastery-oriented behavioral strategies pursued? (4) Were end results impacted? (5) Were results worth the investment? Most of these questions have not been answered in studies about growth mindset interventions, especially in nursing education.

Nursing school requires broad competencies. Most students face some challenges. As nursing schools enroll students with an aim to diversify the nursing workforce, there may be more students who experience stereotype threat or a lack of belonging, threatening retention and academic success. Information about and reinforcement of a growth mindset in the first terms of school could support student success. Student perceptions of benefits of growth mindset are lacking in the literature.

Methods: Growth mindset was discussed in a baccalaureate program first-term pathophysiology class and short videos provided. To reinforce a growth mindset, students completed weekly “1-minute” confidential learning reflections answering: “What topic from this week will you spend more time to understand?”, “What strategy helped you understand a complex concept this week?”, “What was one way you practiced a growth mindset in recent weeks?”, and “How has practicing a growth mindset helped you, or not, so far in nursing school?”. The instructor’s responses to each student reinforced a growth mindset. The last question was analyzed using a conventional content approach, with findings emerging from the data. Preliminary codes were developed and discussed by two investigators to develop a codebook. Coding continued, including an undergraduate nursing student, as an iterative process.

Results: Sixty-six students in three cohorts of students answered the question “How has practicing a growth mindset helped you, or why not?” Qualitative analysis revealed the following three themes. The percentage of students expressing the theme in their response follows.

1. Increased confidence, resilience, and/or using new strategies to learn decreased stress. (89.4%)
2. Increased acceptance of self and others. (53%)
3. Growth mindset is transferable, with benefits in clinicals, nursing practice, and outside of school. (28.8%)

Students expressed overwhelming support for continuing these short reflections, stating many benefits and enjoyment of writing them.

Conclusions/Recommendations: Teaching about and reinforcing a growth mindset took limited time and effort. In evaluating effectiveness of the growth mindset intervention, student responses indicate internalization of growth mindset, positive expectations for success were fostered, mastery-oriented behavioral strategies were pursued by students, and results were worth the effort. Next steps include continuation with new cohorts and adding quantitative data collection.

GERONTOLOGY

A Multifaceted Approach to Improve Shingles Vaccine Uptake in Primary Care

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Purposes/Aims: The primary aim of this quality improvement initiative is to boost the uptake of the Recombinant Zoster Vaccine (Shingrix) within a primary care clinic. This goal was pursued through the implementation of targeted strategies, namely the distribution of educational handouts and the use of patient portal reminders.

Rationale/Background: The background for this initiative lies in the significant gap in Shingrix vaccination rates among patients aged 50 and older within a Baltimore-based primary care clinic. Only 34% of eligible patients had received the vaccine, and this issue was compounded by the clinic’s lack of a tracking system for vaccination status, absence of patient education materials and reminder system. Research had already established the high efficacy of Shingrix in preventing shingles, emphasizing its importance for public health.

Brief Description of the Undertaking/Best Practice: The initiative commenced with an assessment of patients’ shingles vaccination status during in-person visits to ensure accurate and up-to-date data. Patients aged 50 and older, who were identified as not having received both doses of the Shingrix vaccine and who actively used the patient portal, were targeted. These patients received educational handouts during their in-person visits to convey the significance, benefits, and potential risks associated with the Shingrix vaccine. Following this, patient portal reminders were sent to encourage vaccine uptake at their preferred local pharmacy, enhancing convenience and accessibility.

Assessment of Findings/Outcomes Achieved: Preliminary findings from the project indicate promising progress in improving Shingrix vaccine uptake among patients exposed to educational handouts, patient portal reminders, or both. While specific percentages are pending finalization, the data suggests that these interventions have positively impacted vaccination rates.

Conclusions: This project represents a proactive approach to address the challenge of low Shingrix vaccine uptake within a primary care clinic. By deploying targeted interventions such as distributing educational materials and using patient portal reminders, the project aims to exert a positive influence on vaccination rates. While these findings are preliminary and require further analysis, they underscore the potential of employing a multifaceted approach to enhance vaccine uptake within the primary care context. As the project progresses and more comprehensive data becomes available, it is expected that a deeper understanding of its impact will emerge. These insights will not only guide the ongoing development of this initiative but will also offer valuable guidance to similar clinics facing analogous challenges. The journey towards improved vaccination rates is an ongoing one, and this project serves as a vital step toward achieving that goal. Ultimately, it contributes to the overall health and well-being of the patient population and emphasizes the importance of combining educational resources with technological solutions for enhancing vaccine uptake.

GERONTOLOGY

Acculturation and Mental Health in Korean American Dementia Caregivers

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Despite the growing number of Korean-American (KA) family caregivers for persons with dementia (PWD), little is known about how acculturation might affect caregiving stress in this population. A cross-sectional descriptive study using baseline data from an on-going randomized controlled trial of dementia caregiver intervention was performed to examine the association between acculturation and mental health outcomes among KA caregivers (n=32) for PWD. Self-report survey questionnaires including a bidirectional acculturation scale, Center for Epidemiologic Studies Depression Scale, the Perceived Stress Scale, and the Zarit Burden were administered in person in English or Korean by trained bilingual community health workers. The primary independent variable, acculturation, was assessed using a 24-item inventory. It measured two sets of cultural orientation: Korean orientation and American orientation. The mean age was 67 years (SD = 11.8) and 87% were women. Half of the caregivers were spouses of the PWD, while the other half were offspring caregivers. In the multiple linear regression model, caregiver acculturation toward Korean cultural orientation had a significant and positive association with depressive symptoms (= 0.62; SE = 0.25; *p*-value = 0.02) and perceived stress (= 0.29; SE = 0.13; *p*-value = 0.03) after adjusting for age and self-efficacy. No significant effect of American culture orientation was found for caregiver’s burden, perceived stress, or depressive symptoms. Although various studies have reported on disparities in healthcare use and health status between ethnic minority immigrants and U.S. residents, the influence of acculturation level on health status is rarely discussed in caregiving research. Our findings contribute to the expansion and reconfiguration of the perspective through which dementia caregiving research is approached, particularly within the context of KA caregivers. This finding also serves as a basis for future studies aimed at developing tailored mental health intervention strategies targeting the stressors related to acculturation, with the goal of improving mental health outcomes among KA immigrant family caregivers of PWD.

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Aerobic Fitness and Cognition in Mild Cognitive Impairment: Findings from the ACT Trial

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Background: Physical activity has been linked to reduced risk for Alzheimer's disease (AD), but randomized controlled trials (RCTs) of aerobic exercise have shown inconsistent cognitive effects ranging from negative to moderate benefits. Multitude mechanisms of action have been reported for aerobic exercise to underline its cognitive benefits such as aerobic fitness, but studies remain limited and report mixed findings.

Purpose: Examine the associations of aerobic fitness with executive function, memory, and global cognition in community-dwelling older adults with mild cognitive impairment in the ACT Trial that tests the cognitive effects and mechanisms of 6-month combined aerobic exercise and cognitive training.

Methods: The ACT Trial is a randomized control trial. At baseline, aerobic fitness was measured by peak oxygen consumption (VO_{2peak}) in a laboratory-based cycle-ergometer test, executive function with the computerized EXAMINER, memory with Ray Verbal Learning Test, and global cognition with Montreal Cognitive Assessment. All assessments were performed by staff who were blinded to the study aims. Data were analyzed with the general linear model. Model 1 included covariates (age, sex, race, education, physical function, activities of daily living, and Geriatric Depression Scale). Model 2 further included $VO2_{peak}$.

Assessment of Findings: The sample size was 146 with an average age of 73.8±5.73 years old, 16.9±2.89 years of education, 51.4% male, and 91.8% Caucasians. VO_{2peak} significantly predicted executive function composite (F=5.44, p=.021). Model 2 with VO_{2peak} included explained 19.0% of the variance in executive composite (F=2.73, p=.005), in comparison to 15.3% in model 1 (F=2.38, p=.017). SWT approached significance (F=3.00, p=.086). Moreover, VO_{2peak} significantly predicted fluency factor (F=5.05, p=.027) with model 2 explaining 17.6% of the variance in fluency factor (F=2.48, p=.010) vs. 14.4% in model 1 (F=2.21, p=.026). Last, VO_{2peak} did not predict cognitive control, memory, and global cognition.

Conclusions: Aerobic fitness predicted overall executive function and fluency in older adults with MCI, which is consistent with findings in healthy older adults. Future exercise trials need to measure aerobic fitness to illustrate if any observed cognitive effects are mediated by gains in aerobic fitness and who benefits from aerobic exercise interventions to guide precision exercise.

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Balance Self-Management Perceptions Among Hospitalized Older Adults

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Purpose: The aim of this in-progress study is to explore perceptions of balance self-management in hospitalized older adults and their perspectives on hospital fall prevention interventions.

Background: Inpatient falls are a persistent problem, and falls among hospitalized older adults (≥ 60 years old) are up to 50% higher than inpatient falls among younger adults. Despite research and practice efforts, inpatient fall rates have not significantly decreased in the last decade. An area of inpatient fall prevention research that has received less attention is older adults' perceptions of their own fall risk in the hospital. However, it is well established that perceived risk guides health behavior. A recent phenomenological study revealed that the hospitalized older adults did not use the term 'fall risk' to describe their subjective experience. Instead, they used the term 'having a balance problem.' The older adults described how they used common-sense strategies to manage their own balance problems in the hospital to prevent falling, and these strategies were different from the standard hospital fall prevention interventions. Further exploring what specific strategies are used by older adults in the hospital to prevent falls is needed to develop fall prevention interventions that support older adults' balance self-management. The theoretical framework for this study is Bandura's self-efficacy theory, as described by his Social Cognitive Theory. It outlines how self-efficacy and outcome expectations about a behavior can impact an individual's execution of that behavior, such as balance management.

Method: This study uses a qualitative descriptive design using individual semi-structured interviews with hospitalized older adults on the telemetry, medical-surgical, and orthopedic inpatient units. Between 15 and 25 participants are being recruited, yet, sample size will be guided by thematic saturation. Inclusion criteria are hospitalized adults age 60 and older, who are English speaking, alert and orientated to time, person, and place, admitted for a minimum of 48 hours, and assessed as at risk for falling in the hospital based on nursing assessment. The interview questions include: "Tell me about the common-sense strategies you are using to manage your balance so you do not fall down while in the hospital," and "what do you think older adults should do to maintain their balance and not fall in the hospital?" Content analysis of the audio-recorded and transcribed interviews are conducted by two researchers with deductive and inductive coding. Deductive codes are based on the theoretical framework and a literature review.

Assessment of Findings: From this study, we expect to better conceptualize the actions that older adults take to manage their balance and reduce their risk of falling while hospitalized. Furthermore, we aim to better describe their perceptions of the efficacy of those actions and their ability to execute them, as well as their perspectives on hospital fall prevention interventions.

Conclusion: Exploring the persistent problem of inpatient falls from the older adults' perspective is foundational for developing patient-centered interventions to decrease falls, support balance self-management, and improve health outcomes among this vulnerable population.

Community-Based Recruitment of Ethnically Diverse Dementia Family Caregivers

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Background: Older immigrants to the United States are often diagnosed with dementia in later stage when their informal caregivers (often families) face crisis due to difficult behaviors of persons with dementia (PWD). Research with hard-to-reach, monolingual immigrant adults from ethnic minority communities can present a multitude of challenges throughout the research process. Studies have shown that ethnically diverse caregivers of PWD underused care resources. To meet the unmet needs from the vulnerable diverse caregivers with limited English Proficiency, we have conducted a community-based randomized controlled trial (RCT) implementing a culturally, language sensitive, home-visit based intervention led by community health workers who speak their respective languages to support racial/ethnically diverse family caregivers of PWD.

Purpose: The present study reports the highlights of lessons learned from the community-based recruitment outreach activities of the RCT among ethnically diverse family caregivers of PWD.

Methods: The present study used a descriptive study design. Community outreach activities have been performed in Southern California to recruit ethnically diverse caregivers (i.e., Latino, Vietnamese, Korean vs non-Hispanic White as a reference group). The study flyers that were available in Spanish, Vietnamese, Korean, English were distributed in local medical offices including federally qualified health centers (FQHC), churches, senior centers, adult-day centers, health fairs, health webinars, and non-profit community organization serving for caregivers and older adults. Media including local newspapers and radios were used to promote the RCT. Challenges and strategies of recruitment were discussed weekly among research team.

Results: The study recruitment has begun in 2021 while COVID-19 safety policies were applied. Over 2 years, we have screened 219 persons who called our research team telephone lines (4 different languages). Among those, 150 (68.5%) were eligible to enroll. Among enrolled participants, there were 53% spouse vs. 41% offspring; 18.7% Latino, 25.3% Vietnamese, 52.7% Korean, and 24.7% non-Hispanic Whites. Participant recruitment is on-going.

Recruitment sources were varied among different ethnic groups. Most common sources included doctor’s office (15.5%), support groups (11.4%), and snowball (11%). Throughout recruitment, the following challenges arose: addressing the lack of familiarity with research among ethnic minority family caregivers, earning the trust of caregivers, and identifying creative ways to reach out to ethnically diverse caregivers.

Conclusions: Our recruitment strategies have been improved during the pandemic. Diverse caregivers of PWD have been continuously enrolled to the RCT. Strategies were identified to address the challenges: engaging the support and collaboration of trusted, bilingual and bicultural community-based providers (sharing the same culture with patients and their families), building culturally responsive rapport with caregivers, and seeking continuous feedback from caregivers to improve the appeal of the research project implementation.

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Development of a Model to Explore Dementia Caregiver's Experience of Ambiguous Loss

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Purpose: This is a report of the conceptualization of an integrated communication model that is useful for practitioners assisting spousal caregivers of dementia patients process feelings of ambiguous loss.

Background: Ambiguous loss has been described as the caregiver's experience of an unclear loss with negative implications for grieving and decision-making. Grieving of ambiguous loss has been associated with caregiver burden and depression. Interventions aiming to improve these outcomes have been largely unsuccessful, indicating a gap between the guiding theories about ambiguous loss and their clinical application. Indeed, this theory-to-practice gap has been debated for decades in nursing, where theories are criticized for being increasingly irrelevant to practitioners. However, lack of usefulness does not undermine the scientific value of theories; instead, it highlights the specific ways that theories can be incongruent with practice. While theories in nursing almost always delineate the antecedents and the outcomes of an experience, they rarely describe or explain the complex process by which outcomes are achieved. Scientific models, however, are frequently about such complex processes – so it is perhaps ironic that they are almost as frequently overlooked in mainstream nursing science. Many other scientific fields (i.e., genetics, neurobiology etc.,) have embraced model-based research, and model-based research in nursing may present solutions to the theory-practice gap.

Literature Review: PubMed, CINAHL and PsychInfo were explored for articles connected to ambiguous loss. Literature was reviewed for a better understanding of the concept of ambiguous loss, its antecedents, and outcomes (i.e., pre-death grief). Additionally, a snowball technique was used to find seminal articles in the theory of ambiguous loss. Finally, literature in nursing, caregiving and psychology were explored to identify constructs that influence antecedents and outcomes of ambiguous loss. Here, special attention was paid to relational theory (i.e., attachment) as well as constructs from interpersonal psychology (i.e., mutuality strain; personal and relational integrity).

Scientific Logic and Results: The review of literature inspired the creation of a communication model which ties theories of attachment to that of ambiguous loss, as well as constructs of personal and relational integrity, and decision-making. Attachment and ambiguous loss theories were linked together as each describes experiences of relational bonds forming or disintegrating, respectfully. Constructs of mutuality or strain were identified as characteristic of any relationship and were considered important in the formation or disintegration of relational bonds. Furthermore, constructs of personal and relational integrity were found to contribute to relational mutuality or strain and guided decision-making. The model therefore integrates these constructs to provide researchers and clinicians with a "picture" or a "map" of the psychological and relational dynamics of ambiguous loss.

(poster will show model)

Eating Experiences in People Living with Dementia: A Concept Analysis

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Aims: To analyze the concept of eating experiences in people living with dementia.
Background: Eating experiences in people living with dementia are one of the principal foundations of dementia care at mealtime. To date, eating experiences as a concept have not been clearly defined, described, and analyzed.
Methods: Rodgers' evolutionary method of concept analysis was used as a framework for the paper. The literature was searched using electronic databases, including PubMed, Google Scholar, CINHAL, PsycInfo, Web of Science, and Embase, with no date limitations. Any quantitative or qualitative studies published in English which were focused on eating or mealtime experiences in nursing or social science journals were included. The attributes, antecedents, consequences, and case examples of the concept were identified.
Findings: Twenty articles met the inclusion criteria. The defining attributes included the relationship between food and self, interpretation of self, and engagement during mealtime. Antecedents used in the socio-ecological model to represent these attributes included diet (intrapersonal), cultural identities (interpersonal), and mealtime routines (environmental). The consequences of eating experiences in people living with dementia were also identified, which included satisfaction, quality of life, and personal relationships.
Conclusions: A theoretical definition and conceptual model of eating experiences in people living with dementia was developed. The identified attributes, antecedents, and consequences of cultural competence can be utilized in nursing education, research, and intervention approaches. This article establishes a better understanding of eating experiences, allowing nurses to better communicate with older people with dementia and primary family care partners to develop personalized non-pharmaceutical interventions and care strategies to achieve an optimal quality of life.

Education and Bingo Exercise: Pressure Injury Reduction in an Assisted Living Facility

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Background: According to the 2015-2016 National Center for Health Statistics report, the number of adults over the age of 65 was 48 million, and is expected to double by 2050. In 2012, the Kaiser Family Foundation reported 1.35 million individuals with cognitive impairments and reduced mobility residing in nursing homes [NHs] in the US. The Centers for Medicare and Medicaid Services [CMS] reports that around 60,000 people die annually from pressure-related injuries. Advanced aging, immobility, and chronic illness are risk factors for developing pressure injuries, with impaired mobility being the highest predicting risk factor.

Local Problem: This quality improvement project will take place in a Northern California assisted living and memory care facility. The project aims to reduce the current 10% rate of pressure injuries at the facility through addressing both the lack of pressure injury prevention knowledge among staff, and residents' willingness to improve their mobility status.

Methods: Institutional Review Board approval was obtained to conduct this mixed methods sequential explanatory study. The sample size is based on the facility's 28 residents. Demographic data will be collected. Residents will be screened for pressure injuries using the Braden scale, prior to implementing the interventions. Residents 65 years and older, with minimal to no cognitive impairment, and independently mobile will be included in this study. All 10 staff members will be included in this study. All information collected will be stored in a password-secured location.

Staff Interventions

After consent is obtained, staff will participate in six 1-hour education workshops around the topics of pressure injury risk factors, assessment, and proposed treatment plans based on scope of practice. Knowledge of staff education about pressure injury prevention will be assessed through pre- and post-surveys. Data will be analyzed using paired sample t-tests.

Resident Interventions

After consent is obtained, researchers will conduct education and exercise sessions for residents. Six workshops will be offered to residents biweekly between November 2023 to March 2024. Each workshop will consist of a 15-minute education session and a 45-minute bingo-exercise session. This bingo-exercise method was validated in a previous study. Topics covered will include definition and identification of pressure injuries, risk factors, and ways to minimize their development. Knowledge of resident education about pressure injuries will be assessed through pre- and post-surveys. Data will be analyzed using paired sample t-tests.

Resident and staff satisfaction will be assessed at the end of the interventions using Likert scale surveys. Data will be analyzed using an ordinal regression model. Pressure injury rates before and after interventions will be compared and transferred onto an annotated run chart to track any changes.

Results: There are currently no results to report at this time, but will be shared in the poster presentation at the 2024 Western Institute of Nursing conference. This will include qualitative and quantitative outcome data that is analyzed. In addition, any unintended consequences and implications for practice and future research conduction will be shared.

GERONTOLOGY

Implementation of a Renal Failure Risk Assessment Tool Prior to Cardiothoracic Surgery

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Background: Of patients undergoing cardiothoracic surgery (CTS), up to 50% are at risk of developing an acute kidney injury (AKI) after surgery. Cardiothoracic surgery-associated AKI (CSA-AKI) rates are 15-30%, with 1-5% of patients requiring renal replacement therapy. CSA-AKI can increase mortality and morbidity, leading to more extended hospital stays, longer ICU stays, and higher costs.

Local Problem: In 2022, an academic medical center in the United States performed 463 cardiothoracic surgery (CTS) cases with a mix of elective, urgent, emergent, and salvage cases. The screening for renal failure risk before surgery is via a risk calculator provided by the Society of Thoracic Surgery (STS). This calculator is available for eight specific surgeries, and the medical center performs a much more extensive range of procedures. This gap left 54% of patients without a renal failure risk assessment. 77% of patients with new-onset renal failure in 2022 did not have a renal failure risk assessment before CTS due to falling outside the available categories provided by STS.

Methods: An in-depth literature review was conducted, looking for a validated tool that could be used to assess the risk of renal failure prior to CTS in all patients. The Thakar scale was identified, and multiple studies comparing different tools showed that this tool proved to be the most robust in predicting renal failure requiring dialysis after CTS. The IHI Model for Improvement will be used to guide the implementation of this tool by setting an aim, identifying if that change is an improvement, and selecting the change. This project will aim to have at least 90% of patients screened for renal failure risk by December 31, 2023. One quantitative measure we will look at to determine if a change has taken place is the number of patients screened for renal failure risk prior to surgery. The change selected for this improvement is by using the Thakar scale for patients during the initial visit with cardiothoracic surgery on all inpatient and outpatient patients.

Interventions: There will be a collaboration with lead Advanced Practice Clinicians (APCs) and IT to create an EPIC tool utilizing the Thakar scale that can be embedded in provider notes. An educational presentation will be given during a provider meeting that will include the screening tool and documentation of the screening tool. An open discussion will be provided to identify potential barriers to implementation and use of the tool. Reference material will be easily accessible for providers.

Results and Conclusion: Change statistics will be analyzed to show changes in screening rates for renal failure risk before cardiothoracic surgery. Survey data will be analyzed to determine the feasibility, usability, and satisfaction using quantitative data from close-ended questions and qualitative data from open-ended questions to demonstrate areas for future improvement with the renal failure screening tool and workflow.

Interpersonal Support & Psychosocial Outcomes Among Caregivers: A Mixed Methods Study

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Aim: We are investigating whether informal caregivers who perceive a lack of interpersonal support from other family or assisted living facility staff members (1) report lower relationship quality with their care recipient who lives with Alzheimer's disease or related dementias and (2) demonstrate higher rates of caregiver burden and depression and fewer positive aspects of caregiving, compared to caregivers who receive interpersonal support.

Background: Assisted living is increasingly used as a substitute for institutionalized nursing home care. However, unlike nursing homes, models of care in assisted living are not regulated, resulting in increased need for informal care from family and friends. Nearly half of those who reside in assisted living live with Alzheimer's disease and related dementias (AD/ADRD). Increased caregiver burden and low-quality caregiver relationships are significant risk factors for institutionalization of individuals who live with AD/ADRD. Our study aims to examine the relationship between interpersonal support for informal caregivers and psychological and relational outcomes.

Methods: We are conducting a mixed methods study and are currently recruiting a prospective cohort of informal caregivers to residents of assisted living facilities who live with AD/ADRD in Arizona. Caregivers will complete longitudinal, reliable and valid assessments that examine their relationship with their care recipient, caregiver burden, depression, and positive aspects of caregiving. We will conduct semi-structured interviews with a subset of our caregiver cohort to further probe their experiences caring for someone with AD/ADRD in assisted living. We will conduct bivariate analyses to understand the relationship between interpersonal support and caregiver outcomes; we will conduct thematic analyses of the semi-structured interview data. We will use our qualitative findings to confirm or refute our quantitative findings.

Findings: We anticipate caregivers who are unsatisfied with the support they receive will report decreased relationship quality with their care recipient, increased burden and depression, and decreased positivity regarding caregiving. We anticipate our qualitative findings will reveal disparities with respect to the social determinants of health (e.g., challenges with time off and employment, transportation barriers, health insurance barriers, etc.) and intersectionality (e.g., gender, race, etc.) affecting their ability to care for their care recipient with AD/ADRD in assisted living.

Conclusions and Implications: Our findings will inform desperately needed strategies to reduce burden and depression that will improve caregivers' quality of life and increase their psychological and emotional capacity to care for their care recipient with AD/ADRD. Our findings will provide valuable insight to family, friends, and clinical staff – in particular nurses and their practice of supporting patients and their loved ones – on the social needs of informal caregivers, and they will identify areas in which regulatory standards for residential facility staffing requirements and respite for informal caregivers can be strengthened, ultimately improving the health and wellbeing of informal caregivers, which will improve quality of care.

Funding: Arizona State University Edson College of Nursing and Health Innovation Discovery Pilot Awards for Dementia Caregiving (ID# GF000000002706)

African American Cigarette Smoking & Cessation Pursuit, a Qualitative Project

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Purpose/Aims: To examine African American smokers' attitudes, experiences and perceptions regarding tobacco smoking and cessation.

Rationale/Conceptual Basis/Background: Despite comparable rates of tobacco smoking between African American and Whites, African Americans are more likely to die from tobacco-related diseases. Deficits in access to tobacco-related disease screening and standards of care exacerbate the disproportionate effects of tobacco-related health outcomes for African Americans including heart disease, stroke and cancer, all of which are the leading causes of death for this vulnerable population. In order to counter these outcomes, improvement in tobacco cessation interventions and targeted access to resources are needed but little is known about culturally specific approaches to improve cessation rates among African American smokers. Using qualitative methods, this project aimed to explore the importance, usage, and meaning of tobacco use from the perspectives of African American smokers.

Methods: Participants were recruited using flyers and through local community organization outreach. A semi-structured interview guide was used to conduct individual interviews (30-60 min) in a private setting with a sample of African American adults (ages 25-58 years) who were self-reported cigarette smokers. Guided by Grounded Theory methodology, audio-recorded transcripts were de-identified and checked for accuracy before coding. Memos were written to document all aspects of interaction, reflexivity, and interviewer impressions.

Assessment of Findings/Outcomes Achieved: Participants (n=5; 2 women and 3 men) shared the origin of tobacco initiation and how initial use proliferated to recurrent use. All but one were found to be light smokers (reported smoking ≤ 10 cigarettes per day). They elaborated on how their tobacco use was impacted by a combination of psychosocial stressors including depression and/or anxiety, physical barriers that kept them from either buying or using cigarettes when desired, and affirmed awareness of the consequences of smoking. Each participant smoked when they experienced a negative emotion, even after cessation of smoking. Cigarettes were used as a coping mechanism due a lack of money, resources or power.

Conclusion/Implications: Findings suggest that continued tobacco use was a consequence of perceived need to smoke in response to varying stressors. Although all participants knew that cessation would be best for them, as it would positively benefit their health and the health of their loved ones, they maintained that resources to help them were not effective given their lifestyle demands and they needed to use cigarettes to cope with difficult aspects of their lives. It is noteworthy that the challenging aspects of their lives can be conceptualized as social determinants of health and call for a holistic approach that heavily considers contextual influences on smoking and cessation behaviors to address disparities among this population. The importance of this work is underscored by the reality that light smoking is a common phenomenon, but little is known about African American light smokers as most literature for this demographic focuses on moderate to heavy smokers.

Focus Group Study of African American Light Smoker Recurrent Themes

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Purpose/Aims: To explore the perceptions, experiences and attitudes of African American Light smokers as it pertains to factors associated with barriers and facilitators of tobacco use and cessation behaviors.

Rationale/Conceptual Basis/Background: Despite comparable rates of tobacco use among African American and Whites, African Americans are more likely to die from tobacco-related diseases. Studies suggest that a focus on moderate (smoking 10<19 cigarettes per day (CPD)) to heavy (smoking 20+CPD) smoking has yielded little knowledge about light smokers (smoking ≤10 CPD), the latter of which comprises 50% of the African American smoking population. Though dependence measures for African American light smokers (AALS) are comparable to that of white heavy smokers, AALS report receiving little to no cessation interventions from healthcare providers. To inform effective cessation interventions among AALS, this study explores their experiences, perceptions and attitudes about smoking initiation and exposure to alternative tobacco products as well as barriers and facilitators of their own cessation experiences.

Methods: Using a semi-structured interview guide (SSIG), 2 focus groups were conducted among a total of 8 AALS (5 men and 3 women, ages 47.38± 9.34 years old) who self-reported smoking ≤10 CPD. Interviews were recorded, de-identified and transcribed with content analysis using Dedoose to identify major themes.

Assessment of Findings/ Outcomes Achieved: All study participants reported initiating smoking between the ages of 10-24 years old and 87.% reported making at least 1 serious quit attempt in the last 12 months. Half of the sample endorsed using alternate forms of tobacco, including tobacco use with marijuana, Black & Milds, and E-cigarettes. Among the groups, smoking initiation themes were highly associated with childhood or adolescent exposure to cigarettes and continued access through discarded supply. Initiation involved same-age-group participants either friends or family. Common themes for facilitators of cessation include lack of cigarette preference, lack of time and altering use to appease social connections. As initial use progresses to chronic habit, potential areas that may contribute to variable use by AALS center around ideas of inaccessibility of menthol products, price gouging, variable marketing strategies including perceived quality deficits and endorsement of events that facilitate increased tobacco intake which may help to explain the controversy in current literature.

Conclusion/Implications: Findings suggest that addressing gaps in literature and updating the African American light smoker experience within it could help in addressing tobacco-related disease disparity that affect the group as a whole. Continuing to focus on AALS could help to better understand how resources can be aligned to support perceived deficits within the social determinants of health which ultimately contribute to readiness to quit and actual cessation. Analyzing additional focus group sessions could reveal key aspects that would inform future intervention studies among this demographic.

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Understanding Disparities in Pandemic Mitigation Awareness Among U.S. Adults

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Purpose/Aims: The purpose of this study is to start determining barriers to pandemic mitigation measures, such as vaccines, and the ability to access appropriate levels of care. Our overall goal is to identify ways to build community trust, especially among communities disproportionately impacted by infectious disease outbreak- associated morbidity and mortality. We aim to (1) determine barriers to vaccine access and other pandemic mitigation measures and (2) identify nursing and public health communication interventions that have been effective at increasing awareness of and ability to access mitigation strategies during the COVID-19 pandemic.

Background/Conceptual Basis: Experts in infectious diseases and public health have warned about the potential for pandemics for many years. However, many people in the general public were unaware of these predictions and, as a result, were not prepared when the COVID-19 pandemic started. The health equity framework (HEF) is a science-based model for the promotion of health equity both in research and healthcare. The HEF represents the interactive nature and complexity of health behaviors and outcomes. In the context of this proposal, we want to improve the awareness of and access to pandemic mitigation strategies to reduce health disparities and improve overall population health. Nurses are vital in accomplishing this goal by leveraging trust in the profession and the nursing science. Therefore, the aims are directly tied to HEF's four components: systems of power (Aims 1 & 2), individual factors (Aim 2), physiological pathways (Aim 2), and relationships and networks (Aim 2).

Methods: Data are currently being collected. We are using a qualitative descriptive approach to identify awareness of and access to pandemic mitigation strategies as well as barriers to accessing and implementing health information. Using a qualitative descriptive study, as supported by HEF, helps us understand the complexity of human and population health behaviors related to pandemic mitigation strategies, highlighting why individuals, as well as at-risk groups, might not be aware or able to access pandemic mitigation strategies. Four focus groups are being conducted using semi-structured interview questions. Inclusion criteria are: (1) age 18 years or older, and (2) able to attend one of the focus group interview sessions. Participants are recruited through outreach to local churches, universities, senior centers, and other organizations and through social media platforms such as Facebook and Instagram. Additionally, the researchers are using snowball recruitment techniques to obtain potential participants.

Assessment of Findings: The data will be analyzed and transformed into emergent patterns using In Vivo coding by means of NVivo software. The data analysis approach used will be the Sort and Sift method.

Conclusions/Implications: Health equity is an essential consideration when preparing for pandemic response and education about risk mitigation. People of color were disproportionately impacted by COVID-19 morbidity and mortality. These communities have some of the lowest vaccination rates. Using an equity lens when assessing awareness and access is pivotal to improving public health not only for marginalized communities but also for overall population health.

Funding: Sigma Theta Tau International - Psi-at-Large Chapter Research Grant

Social Determinants of Health Screening in a Pediatric Heart Transplant Clinic

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Purposes/Aims: Describe methods for implementing a social determinants of health (SDOH) screening and referral process in a pediatric heart transplant clinic that utilizes best practices and maximizes stakeholder engagement.

Rationale/Background: The US Department of Health and Human Services and the National Institute of Nursing Research have identified SDOH as a priority area for reducing health disparities and improving health.

Currently, screening for social needs of heart transplant families is done informally through clinician referral to a social worker or via the social worker's independent assessment. Identified needs are tracked through free-text clinical notes. Given the sporadic nature of screening and referral , the true social needs profile of pediatric heart transplant patients is not known and the opportunity to connect families with needed resources may be missed. Universal screening for SDOH allows for all patients to be screened and referred to needed resources.

Approach: After a literature review regarding implementation of SDOH screening in clinic settings, we identified that key stakeholder engagement was critical to sustainably implementing SDOH screening/referral. Key stakeholders included parents of transplant recipients, medical assistants (MAs), transplant nurse coordinators (TNCs), advanced practice providers (APPs), social workers (SWs) and transplant physicians. When SDOH screening was discussed in a patient family advisory council, parents expressed enthusiasm for the intervention, but hesitation regarding inclusion in the medical record and how results may affect future care decisions. Clinical staff (MAs, TNCs, APPs) suggested that the screener be completed prior to the clinic visit, a resource referral must be available, the referral process should be quick and data tracking should allow for follow-up and rescreening at future visits. Finally, the clinic SW reviewed the SDOH screener and identified criteria for immediate referral to social work.

Outcomes: Based on this input, the SDOH screener will be introduced by a letter explaining its purpose. The screener will be delivered via email prior to scheduled visits. If a social need is identified, a multidisciplinary team member trained in the screening/referral process will address the need in clinic and ask if the family would like a referral to services. If so, a team member will place a referral to services, using an integrated digital platform, UniteUS, that connects families to local resources for social needs. Families demonstrating high social needs will be referred directly to the clinic SW. Families will be asked to complete a post-referral survey about their experience. Screening, and post-referral results will be tracked in RedCap. Referral details will be tracked in the UnitedUs platform. Rates of screening/referral and accompanying facilitators/barriers will be tracked to understand effectiveness of the program.

Conclusions: SDOH screening/referral was developed based on expressed key stakeholders. Screening/referral tracking will allow for process modification to better meet the needs of heart transplant families. Furthermore, training a multidisciplinary team in the SDOH screening/referral process unburdens the clinic social worker, allowing for universal screening. Finally, screening for SDOH will allow future study on the relationship between SDOH and patient outcomes at this center.

Quality Improvement Project to Reduce Hemoglobin A1C in Native Americans with Diabetes

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Purpose: To lower hemoglobin A1C readings in Native Americans with type 2 diabetes mellitus receiving their care at an Urban Indian Center clinic through a focused telephone outreach program.

Background: Native Americans have the highest rate of type 2 diabetes of any United States' ethnic group. Diabetes complications may be avoided through adequate glycemic control. An Urban Indian Center's annual Diabetes Care and Outcomes Audit found that 43.5 % of patients with diabetes had hemoglobin A1C readings greater than 9.0%. The clinic postulated that client attendance at more frequent clinic visits would lower A1C values.

Methods: An interprofessional team obtained baseline hemoglobin A1C readings of patients with type 2 diabetes receiving care at the Urban Indian Center's clinic. All patients with A1C readings over 9.0% were included in the project intervention. Each quarter, any new patients whose A1C values were greater than 9.0% were also added to the project. A total of 25 patients were enrolled over the course of the project. Data collected each quarter were clients' scheduled visits, visit attendance, cancellations/ no-shows, intervention calls, and A1C readings. At year's end, the percent of patients with an A1C over 9.0% was again calculated.

Intervention: At project baseline, all enrollees received a telephone outreach call, with the same script, to schedule an appointment with both a family nurse practitioner (FNP) and a certified diabetes educator. Enrollees' scheduled visits and visit attendance were tracked. All enrollees who missed visits, and new enrollees, received a quarterly telephone outreach call, again with the same script, to reschedule with both the FNP and certified diabetes educator. At each visit, data were collected, hemoglobin A1C values obtained and clients rescheduled for follow up. After one year, the project's effectiveness was assessed.

Results: Our intervention demonstrated a marked improvement in A1C levels in the patients who completed more frequent family nurse practitioner and diabetes educator appointments either on their own initiative or with a reminder call. Sixty percent of patients were responsive to the interventions (6 patients self-scheduled and 9 patients were responsive to the telephone outreach phone calls) and 40 percent were non-responsive. Non-responding patients were further categorized to reason for non-response. Five patients switched care to another provider, two patients' underlying behavioral health issues prevented meaningful engagement, and three clients were lost to follow up. The 2022 Diabetes Care and Outcomes Audit showed that 17 percent of patients with diabetes had A1C values greater than 9, a reduction from 43.5 percent in the 2021 audit.

Improving Patient Medical Adherence in a Community Health Clinic

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Purpose: To determine patient adherence in follow-up medical care and the main factors affecting a lack of adherence.

Background: Those without health insurance or lower socioeconomic status have limited access to healthcare. The Emergency Medical Treatment and Labor Act requires hospitals to treat patients regardless of their ability to pay. However, this is a costly solution for hospitals as they usually have to forgive the cost of medical care due to the patient's inability to pay. In some communities, efforts to decrease utilization of the emergency department as a primary source of medical care have resulted in the creation of volunteer clinics. These clinics include various medical providers who give care to patients free of charge. However, if patients are not adhering to follow-up care, they are more likely to need emergency services. As such, identifying patient needs and ensuring follow-up is essential to ensuring patient health and lowering healthcare costs. The Volunteer Care Clinic (VCC) is a free clinic serving uninsured, low socioeconomic residents of Utah County, many of whom primarily speak Spanish. The director of the VCC expressed concern that patients assigned medical tasks after their visit were not completing these prescribed tasks.

Methods: A survey was created to determine if patients were completing medical follow-up care and discover potential barriers to adhering to follow-up care. Qualifying participants included those who had attended the VCC in April 2023 and were referred to follow-up medical care. Two BYU students with fluency in the Spanish language called these patients and conducted telephone interviews. After obtaining informed consent, patients were asked questions surrounding the completion of follow-up care and reasons for non-adherence.

Assessments of Findings: Of the 171 patients who visited the clinic in April 2023, 89 were eligible to be surveyed due to having prescribed medical follow-up. Of the patients called, 68 of the 89 (76%) agreed to participate in the survey. Of the 68 respondents, 32 (47%) reported completing their prescribed tasks. Seven respondents (10%) stated their symptoms resolved. Of the remaining 29 respondents (43%), 11 (16%) reported financial obstacles in completing follow-up care. Ten interviewees (15%) stated time as a barrier to fulfilling their medical duties. Lastly, eight participants reported challenges with scheduling availability in the referred clinic (12%).

Conclusions: Results indicated that time and money were the most significant obstacles affecting patients' ability to complete follow-up medical care. Because of the survey results, the VCC has found two long-term volunteers who will serve as patient advocates. These volunteers will connect patients with community resources and manage a small team of student volunteers from nearby universities to coordinate follow-up care with referrals. Addressing and improving non-adherence for uninsured patients reduces overall healthcare costs while promoting health and equity.

Evaluating the Multilevel Profile of LGBT Caregivers in the United States

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Purpose: In the U.S, there are over 53 million caregivers. Caregivers are individuals who provide unpaid care to relatives/friends and assist with personal needs, household chores, finances, coordination of outside services, or regular check-ins. In a national sample of caregivers, 9% identified as lesbian, gay, bisexual, or transgender (LGBT). This prevalence is likely underreported due to stigma associated with reporting sexual orientation and gender identity, contributing to the dearth of information on the LGBT caregiver experience. This descriptive exploratory study describes the multilevel profile of a national sample of LGBT caregivers in the U.S; evaluates differences in stress, strain, and burden of care by caregiver choice to take on the role, and their feelings of a sense of purpose; and characterizes care provided based on care recipients having a short- or long-term condition.

Rationale/Conceptual Basis/Background: In the community setting, LGBT caregivers may provide care in the context of a chosen family: defined as a group of people to whom an individual is emotionally close to and considers family even though they are not biologically or legally related. LGBT caregivers have unique needs (such as the absence of power of attorney privileges in the clinical setting), and research that characterizes the LGBT caregiver experience to develop population-tailored caregiver support is urgently needed.

Methods: An exploratory secondary analysis was performed using the national, cross-sectional Caregiving in the U.S Survey (2014 and 2019) to examine a subsample of caregivers that identified as LGBT (n=220). Descriptive statistics and chi-square tests were used to evaluate group differences in proportions with statistical significance set at 0.10 to identify potential associations given the small sample size. Caregiver characteristics were evaluated using the socio-ecological framework at multiple levels of influence: individual, relationship, and community. Individual measures included sociodemographic characteristics, emotional stress, physical strain, financial strain, and burden. Relationship measures included having a choice to take on the caregiving role, providing assistance with ADLs/iADLs, feeling a sense of purpose related to caregiving, and whether care was provided for short- or long-term conditions. Community-level measures included whether the LGBT caregiver had access to respite services, friends or family for support, or healthcare professionals for support.

Assessment of Findings: Among LGBT caregivers, not having the choice to provide care was associated with high levels of emotional stress ($p < 0.01$), physical strain ($p < 0.10$), financial strain ($p < 0.05$), and burden of care ($p < 0.01$); feeling a sense of purpose in providing care was also associated with high levels of burden of care ($p < 0.10$). Among LGBT caregivers, care was primarily delivered for long-term conditions, and included toileting ($p < 0.10$) and arranging outside services ($p < 0.05$). Despite the challenges of caregiving, most LGBT caregivers did not have access to community support resources.

Conclusions/Implications: Among LGBT caregivers, assuming the caregiving role without choosing to do so is associated with adverse outcomes. Future studies based on larger samples of LGBT caregivers are needed to confirm these findings and account for potential confounders.

Perspectives of Homeless Adults and Providers on COVID-19 Screening and Vaccination

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Purpose/Aims: People experiencing homelessness (PEH) are vulnerable to COVID-19 transmission, morbidity, and mortality. Primary prevention for this population in the form of vaccination as well as secondary prevention measures in the form of screening, offer a measure of confidence to decrease severe outcomes including mortality among this underserved and under-resourced population. Owing to limited data on the lived experiences of PEH and homeless service providers (HSP) during the pandemic, this study explored how PEH, and HSP perceive COVID-19 screening and vaccination.

Rationale/Conceptual Basis/Background: Existing research among PEH has concentrated on COVID-19 vaccination attitudes, hesitancy, and implementation. However, there is a dearth of literature about experiences of PEH with screening and their decision-making regarding receiving or declining the COVID-19 vaccination.

Methods: A qualitative study design was used and throughout all phases (i.e., design, data collection, data analysis, results, and dissemination) the principles of credibility, transferability, dependability, and confirmability were applied. Using a community-based, participatory research approach, a community advisory board was created which helped to shape a semi-structured interview guide used in remote interviews with PEH (n=21) and HSP (n=10) in Central City East (i.e., Skid Row) in Los Angeles. The research team iteratively reviewed and coded the transcripts using an eclectic thematic method which generated key themes and subthemes.

Assessment of Findings/Outcomes Achieved: The mean age of PEH was 48.3 (SD 16.9, 0-69), and their average length of time being homeless was 7.5 years (SD 9.3, 2-45). Most self-reported to be men (85.7%) and 14.3% were women. Among HSP, less than half (40%) were a mid-level provider, followed by 30% being a program director, 20% being a social worker, and 10% were other. Three major themes were identified: (1) Engaging in the COVID-19 Screening, Isolation, and/or Quarantine; (2) Recommendations for COVID-19 Vaccine Delivery; and (3) Exploring the COVID-19 Vaccination Uptake Decision-Making Process. First, PEH and HSP described the process of engaging in COVID-19 screening, which resulted in five subthemes: (1) attitudes and feelings toward COVID-19 screening; (2) availability of information about COVID-19 prevention and screening; (3) accessing COVID-19 screening and results; (4) describing mixed COVID-19 screening experiences, and (5) experiencing COVID-19 isolation and/or quarantine. Second, PEH and HSP provided recommendations related to COVID-19 vaccination delivery methods, including education and delivery approaches to decrease fear and mistrust among PEH. Third, PEH and HSP described their willingness to receive the COVID-19 vaccine and their considerations that contributed to their decision whether to receive future COVID-19 vaccination.

Conclusions/Implications: Designed to explore the perspectives of PEH and HSP during the COVID-19 pandemic, this study helps us to gain a better understanding of real-world factors impacting vaccination screening and uptake among this underserved community. However, more community-based participatory research is needed to utilize these findings to design a sustainable COVID-19 vaccination and booster uptake intervention with this community. These findings may have a bearing on future COVID-19 screening and vaccination initiatives tailored for this underserved community.

Funding: This work was supported by the University of California, Irvine (UCI) Office of Research, Clinical Research Acceleration and Facilitation Team (CRAFT) COVID-19 Grant.

Addressing Language Barriers for Spanish-Speaking Patients at a Women's Health Clinic

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Background: The Hispanic population in Utah is increasing, and Hispanics comprise the largest non-White group in Utah County. Hispanics living in Utah experience many health disparities related to economic, sociocultural, environmental, and geographic disadvantages. Language barriers contribute to these disparities, resulting in disproportionate risks for illness, chronic disease, and poor maternal/infant outcomes. Professional medical interpretation and language-concordant written resources are evidence-based measures that address language barriers, promote patient satisfaction, and positively impact health outcomes.

Problem/Purpose: Spanish-speaking patients attending a women's health clinic in Utah County experience language barriers that result in care that is not equitable to their English-speaking counterparts. Additionally, staff and providers are dissatisfied with the language services available while caring for this population. Complaints include not having enough time on clinic schedules for these longer visits, video interpretation services not working properly and not having language-appropriate written resources for patients. Professional medical interpretation is used inconsistently, and written patient education materials are not given to Spanish-speaking patients.

This DNP scholarly project aims to address a health inequity experienced by Spanish-speaking patients by improving clinic policies and practices related to communication and language-appropriate services at a women's health clinic. The project will implement interventions that increase provider and staff satisfaction and the use of Spanish interpretation services and written materials. The Model for Improvement will guide this quality improvement initiative by providing a framework for team development and function, establishing objectives and measures, and monitoring intervention effectiveness through Plan-Do-Study-Act (PDSA) cycles.

Methods/Interventions: A training video will be disseminated to all staff and providers outlining the project's purpose, current policies and procedures related to interpretation services, and recommendations for improving interactions with Spanish-speaking patients. A troubleshooting and training guide for using video interpretation will be distributed. Patient handouts and forms will be professionally translated into Spanish. Surveys will be sent to staff and providers for feedback about the project and its purpose. Weekly rounding during encounters with Spanish-speaking patients will be used to collect real-time data and facilitate PDSA cycles. Clinic policies will be revised to correspond with government regulations, legal requirements, and the national standards for Culturally and Linguistically Appropriate Services (CLAS).

Results/Outcomes: Comparative data are being obtained by assessing rates of appropriate interpretation use and documentation pre- and post-implementation. Change statistics and content analysis of quantitative and qualitative themes will measure the change between pre-and post-intervention scores on staff and provider surveys. Data analysis will determine the intervention's effectiveness, feasibility, usability, and satisfaction.

Conclusions: This quality improvement project directly addresses a health inequity experienced by a vulnerable population. This project will demonstrate the feasibility and usability of a practical implementation strategy to realize evidence-based, language-appropriate services for Spanish-speaking patients. Updated clinical policies and an efficient workflow will contribute to faster, smoother care and an expected increase in staff and provider satisfaction. The project results will be disseminated to other clinic sites throughout Utah within the women's health organization.

Pathways of How Homeless Female Veterans Leave Homelessness: A Grounded Theory Study

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Background: The U.S. Department of Housing and Urban Development (HUD) estimated that over 40,000 veterans were homeless on a single night in January 2017. Of those, about 9% were female. The number of homeless female Veterans increased by 7% in 2016-2017, compared with only 1% for their male counterparts. Female veterans are more than three times as likely as female non-Veterans to be living in poverty and homelessness. The gap in knowledge lies in how female veterans leave homelessness.

Purpose/Aims: The purpose of this grounded theory study was to investigate how female veterans leave homelessness. Specifically, this study sought to find answers to the following questions: RQ1) What are the factors associated with homelessness in women veterans? RQ2) What are the effects on women veterans' health and quality of life after leaving homelessness? and RQ3) What are the experiences of women veterans leaving homelessness?

Methods: A constructivist approach guided this research. Purposive sampling was used. Fifteen previously homeless female veterans were interviewed using a semi-structured interview guide with probes to identify the processes that contribute to the homelessness of female veterans before, during, and after military deployment and highlight how they leave homelessness. The interviews were audio-taped and transcribed. Transcripts were inductively analyzed line-by-line and by data, using constant comparison techniques with thematic and categorical mapping and validation. Initial and focused coding was conducted. Both manual and computer analyses were performed. Data analysis was enhanced by using NVivo 1.0 for the study.

Results: Several themes emerged from this study. RQ1 cultivated three themes: 1) childhood trauma, 2) military sexual assault, and 3) lack of transition support leaving the military. These three themes are some of the factors associated with homelessness in women veterans. Two themes emerged from RQ2: 1) better life for children and 2) gratitude has an effect on women veterans' health and quality of life after leaving homelessness. Lastly, in RQ3, two themes emerged: 1) seeking help and 2) support from family. A descriptive dimension analysis called The Power of One was the key to women veterans leaving homelessness.

Keywords: grounded theory, military, female veterans, homelessness, qualitative method of inquiry

Sleep Assessment Among Houseless Individuals

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Background: Sleep inadequacy is linked to chronic health outcomes and lessened physical, cognitive, and mental health, and increased mortality. Houseless individuals report poor quality and duration of sleep and experience increased mental distress. It is unclear the quantity and quality of sleep, factors contributing to sub-optimal sleeping, and how sleep quality impacts daily functioning, decision making, and associations with other health issues among houseless individuals.

Methods: Using a cross-sectional correlation design, a convenience sample of guests at an emergency men's shelter were administered a pen and paper survey regarding sleep duration (Behavioral Risk Factor Surveillance System Survey), sleep quality (PROMIS® Sleep Disturbance), pain and mood (Patient Health Questionnaire [PHQ-8], and Generalized Anxiety Disorder [GAD-7]) surveys.

Results: Among 70 houseless men living in a temporary shelter, 32.8% reported moderate-to-severe sleep disturbance. More than one-third of respondents (38.8%) experienced moderate-to-severe levels of impairment to their daytime functioning caused by poor sleep. The average duration of sleep was 6.5 (*SD* 2.1) hours with 60.0% reporting decreased sleep quality. Variables that were significantly associated with sleep disturbance included: not feeling safe ($r(60)= - 0.34$, $p < 0.001$); feelings of aches and pain ($r(61)= 0.46$, $p < 0.001$); depression ($r(54) = 0.59$, $p < 0.001$) and anxiety ($r(60)= 0.59$, $p < 0.001$).

Conclusion: In this sample of men housed in a temporary shelter, disturbed sleep was related to pain, anxiety, depression, and not feeling safe. Literature on houseless individuals highlights effective sleep behaviors as barriers to successful transition to permanent housing. Pain, mental health, and safety interfere with duration and quality of sleep which affects mental well-being. Individuals who experience inadequate sleep, experience more anxiety and depression, making decisions and activities of daily living more difficult. Effective pain control through use of non-pharmacologic and pharmacologic measures increases sleep quality and duration and are contributory to healing and pain management. The results of this study provide further insight for opportune interventions to enhance sleep hygiene while living in transitional shelters. Opportunities exist to improve participants' sleep by reducing noise, addressing pain and negative affect, and increasing feelings of safety. Implementing programs such as yoga, meditation, stress management, and cognitive behavioral therapy to enhance sleep hygiene while in transitional shelters may further facilitate transitioning houseless individuals to permanent housing.

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Digital Health Classes for Limited English Proficiency Older Latino Adults

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Background: An increased expectation of digital health literacy has emerged post-COVID, leaving digital non-natives in an ever-widening digital divide. Low levels of digital health literacy translate to greater vulnerability due to barriers to healthcare access and engagement which can lead to poor health outcomes. A growing body of evidence suggests low digital health literacy contributes to racial and ethnic healthcare disparities, particularly amongst older adult Latinos. Limited English proficiency (LEP) further compounds the digital discrepancy. Currently, there is a gap in research to guide the development of digital health literacy learning pathways for digitally low performing individuals. A literature review finds a paucity in methodology and best practices regarding older adult education, specifically pertaining to digital technology and digital health literacy. Evidence for best practices in teaching digital health literacy that specifically targets older adult Latinos with LEP was not identified within the literature.

Purposes: This Doctoral of Nursing Practice (DNP) project seeks to improve the delivery of healthcare by empowering older adult Latinos with limited English proficiency to overcome barriers in navigating their electronic medical record patient portal to better manage their healthcare. By offering culturally and language specific classes with one-on-one support, participants will increase their digital literacy skills and increase their ability to access their medical records, engage with their provider team, and participate in their healthcare decision making.

Methods: This DNP project will provide digital health literacy group classes, including one-on-one digital coach support, for Latinos aged >65 years in a geriatric primary care clinic in a large academic medical center in Southern California. An ‘intergenerational service learning in higher education’ model of instruction will be used per positive findings of several University research studies. Some areas of instruction include: accessing their patient portals, scheduling medical appointments, reviewing lab results, requesting prescription refills, and messaging their provider. A validated survey tool designed to measure digital health literacy will be administered pre and post intervention to measure improvement in scores. Educational content will be customized per results of the individual’s survey. A post-class survey will also be utilized to assess participant confidence and satisfaction levels. A post-class follow-up call will be provided to answer questions and offer more resources for digital support. Quantitative data will include t-test scores to measure score improvement and descriptive statistics to summarize demographic information. Qualitative data includes participant confidence levels, open-ended comments on the curriculum and classes, and satisfactory ratings using Likert scale questions.

Results: Results will be presented at the conference.

Conclusions: This project aims to help overcome the existing digital divide amongst older adult Latinos with LEP within the geriatric primary care setting. Increasing digital literacy can improve patient engagement, shared decision making, and have positive impact on health outcomes. Potentially this project’s educational model and curriculum can be translated to other clinic settings and populations to support healthcare systems’ work to bridge the digital divide and decrease health outcome disparities.

Improving Access and Timeliness of Employee Annual Exams

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Purpose: The project aim is to expand employee access to early disease detection, US Preventative Task Force recommended screenings, vaccinations, and health education.

Introduction: Doctorly prepared Nurse Practitioners (NPs) are uniquely qualified to lead change that increases access to preventive health care services, a key objective of both the American Association of Colleges of Nursing (AACN)'s 2021 Core Competencies for Nursing Education and the U.S. Department of Health and Human Services Healthy People 2030. Employee health clinics are similarly uniquely positioned to improve the overall health of an organization's employees by providing low-cost, easy access to high-quality care. RedMed, a nurse-managed employee health clinic, provides urgent and work injury care to University of Utah employees. In response to patient demand, RedMed began offering employee annual exams (EAE) in January 2023.

Background: The average wait time for an annual physical in university ambulatory clinics is ten weeks. Further, an EAE may require employees to take a half day or more off work.

RedMed Clinic is located in the center of the university campus. The clinic is funded through the university and offers care at no cost to the employee. While an Occupational Medicine physician serves as the Medical Director and a clinical resource, RedMed is administered and staffed by College of Nursing staff and faculty.

Methods: The clinical team includes four family NPs and one medical assistant. Employees are defined as anyone earning a paycheck from the university. RedMed NPs incorporate EAE by offering daily EAE appointments and bringing in additional providers to meet demand. EAE include a history and physical exam, and screening for mental health and United States Preventive Services Task Force (USPSTF)-recommended preventative care, including blood work and imaging. Vaccines are offered according to Centers for Disease Control (CDC) recommendations. EAE results are forwarded to the employee's primary care provider (PCP). If no PCP is identified, employees are assisted in establishing one.

Using the EHR to measure volume, 247 EAE were performed in the first seven months. These EAE resulted in the following screenings and referrals: 25 Papanicolaou tests, 114 Hemoglobin A1C, 135 sexually transmitted infections, 119 lipid panels, 11 mammography, and 15 colonoscopies. Forty-nine patients were referred for primary or specialty care, including behavioral health. RedMed was frequently able to provide EAE appointments within one day, and employees can return to work in just over 1 hour. Patient survey data obtained in the first quarter of FY24 suggests that 91.4% of respondents give our clinic the highest rating for likelihood to recommend the clinic to others. Similarly, 85.2% of respondents gave the highest rating for appointment availability.

RedMed NPs successfully implemented EAE services, improving access and timeliness to disease prevention and health promotion services to the employee population.

Implications/Further Work: Challenges include no-show visits, limitations in clinic space and provider time. RedMed NPs continue to look for ways to expand services. A next step may be adding a Psych-Mental Health NP or expanding health promotion offerings such as weight loss or smoking cessation programs.

Lived Experience of Patients with Vascular Malformation: A Qualitative Metasynthesis

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Purpose: The purpose of this study was to synthesize the existing qualitative literature on the the lived experience of patients with vascular malformations to identify emergent themes and new areas for clinical care and research.

Background: Vascular malformations are a heterogenous array of congenital illnesses that cause overgrowth, disfigurement, pain, functional limitations, and disability with symptoms worsening over time. There is a lack of curative treatment options, and management is directed at palliation of symptoms. The current classification system of vascular malformations was published in 1996, meaning this is a relatively new field with much room to understand the experience the patient has with their illness. Quantitative research has demonstrated a lower quality of life compared to the general population, but there is a lack of context to this data due to research methods. A qualitative metasynthesis was conducted to evaluate the lived experience of patients with vascular malformations to evaluate for novel themes that may lead to improvement in clinical management or research opportunities to improve healthcare for patients with these rare illnesses.

Methods: A formal metasynthesis was conducted, which followed four steps: (1) form the clinical question and refine search criteria, (2) complete a literature review following the Preferred Reporting Items for Reviews and Meta-Analysis (PRISMA), (3) quality appraisal of included literature with Lett's Critical Review Form, and (4) completion of team-based reciprocal translation and thematic analysis to synthesize literature. PubMed, CINAHL, Johanna Briggs, and Embase were used to retrieve English language, peer-reviewed qualitative and mixed-method articles from 1996 to May 2023.

Assessment of Findings: Six articles met the criteria for inclusion. A wide range of vascular malformations were represented, ranging from slow-flow malformation to high-flow or complex with associated overgrowth. Studies were conducted in the United States, France, and Germany, focusing mainly on the adult experience, with one article focusing solely on pediatrics. Three main themes emerged: risk for isolation, uncertainty and hope, and healthcare experiences.

Conclusions and Implications for Clinical Practice, Education, and Research: Each derived theme in this metasynthesis offers avenues for clinical practice change, education for those caring for these patients, and research potential. Social isolation may be addressed with better incorporation of goal-directed care and research to evaluate the effect of social isolation on the patient. Uncertainty and hope provide avenues to improve the clinical experience through acknowledgement of the unknown of their illness and ways in which hope can be promoted. Further research may be driven by Uncertainty in Illness Theory to better understand this phenomenon and how it impacts patients. Healthcare experiences offer ways in which clinical interactions can be improved to avoid traumatic healthcare experiences that often remain with patients, impacting their feelings about future healthcare. This metasynthesis revealed findings that help healthcare providers understand the lived experience of patients with vascular anomalies and has the potential to inform clinical practice and guide future research.

Keywords: lived experience, qualitative research, vascular malformations, social isolation, healthcare experiences, uncertainty, hope

Improving First-Time Screening Colonoscopy Rates Among 45-49-Year-Olds

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Purpose: The purpose of this project is to improve first-time screening colonoscopy rates among 45-49-year-old adults.

Background: Colon cancer rates are increasing in the United States (US) yearly. Ansa et al. (2018) noted the incidence of colorectal cancer in the US had increased by 45.9% per 100,000 in 14 years. Furthermore, colon cancer rates among 45-49-year-olds have increased dramatically. Siegel et al. (2023) found that colon cancer rates in adults younger than 55 had doubled in the last decade. Locally, at a Southeast Alabama gastroenterology clinic, 25% of adults younger than 50 were found to be past due for a first-time screening colonoscopy exam. Although screening colonoscopy compliance prevents colon cancer, first-time screening colonoscopy rates continue to decline. The American Cancer Society (2020) estimates that 20% of adults between the ages of 45-49 in the US are past due for a screening colonoscopy exam. This is significant because decreased colonoscopy rates result in increased colon cancer rates.

Methods: An intervention that was supported by the literature to improve screening colonoscopy rates among 45-49-year-olds was implemented. The intervention chosen was implementing a reminder recall system. The electronic health record was utilized to identify and recruit patients who were due for a first-time screening colonoscopy exam. The sample size was 35 participants. Participants were reminded to schedule a colonoscopy via two phone calls and one mailed letter. A pre-and post-chart audit was utilized to analyze completed colonoscopy rates. To measure the intervention outcomes the research team calculated a percentage increase from the pre-and post-chart audit data.

Findings: The chart audit findings revealed at least a 55% increase in first-time screening colonoscopy rates among 45-49-year-olds. These findings indicate that implementing a reminder recall system is successful at improving first-time screening colonoscopy rates.

Conclusions/Implications: Issuing reminders is successful at improving first-time screening colonoscopy rates. One implication for nursing practice is that advanced practice nurses should focus on promoting cancer screening service awareness and incorporating methods that improve patient correspondence.

Motivation for Physical Activity in Low-Income Adults: Integrative Literature Review

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Aim: To explore, review, and assess the literature on motivation for physical activity in low-income adults to inform future research and clinical interventions.

Background: Physical activity has numerous health benefits. However, only a quarter of adults meet the recommended amount of weekly physical activity. Adults with lower incomes engage in less physical activity than adults with higher incomes resulting in increased rates of chronic disease and higher all-cause mortality. Focusing primarily on barriers to physical activity has not resulted in essential changes in activity levels, particularly in low-income adults. Motivation is an integral component of health behavior choices and gaining a greater understanding of motivations for physical activity is a foundational step in impacting physical activity participation.

Design: An integrative review of the qualitative and quantitative literature on motivation for physical activity in low-income adults.

Methods: Studies written in English, with a primary focus on low-income adults, discussing physical activity, and including a component of motivation or drive were included. This review was guided by Whittenmore & Knafl's 5-stage methodological approach for integrated reviews. The search strategy and reporting methods were consistent with PRISMA guidelines. The Johns Hopkins Evidence Level and Quality Guide was used to assess the quality of the included studies.

Data Sources: PubMed, CINAHL, PsycINFO, SPORTDiscuss, and Google Scholar were searched between 2018 to 2023 in coordination with a medical librarian.

Assessment of Findings: A total of 19 studies (seven qualitative, six quantitative, three mixed methods, and three reviews or syntheses) met the inclusion criteria. Three main categories of factors impacting physical activity in low-income adults were identified: (1) motivators for physical activity, (2) barriers for physical activity, (3) and concepts that were found to be both a motivator and a barrier. Despite specifically aiming to uncover motivators for physical activity in this population, the literature predominantly featured barriers. Notably absent from the literature on motivation for physical activity in low-income adults were studies published in nursing journals, using nursing theories, or with nurse-based interventions.

Conclusion: This integrative literature review highlights the need for more information about what does or would motivate low-income adults to be more physically active. Additionally, it illuminates the lack of nursing presence in this area and the need for nursing-based approaches to address physical inactivity in low-income adults.

Impact: The deleterious effects of inactivity disproportionally impact low-income adults. There is a pressing need to increase physical activity levels in this population. Assembling information on motivation for physical activity in low-income adults provides valuable insight to guide future research and the development of clinical interventions to increase physical activity. Given its holistic and patient-centered approach, nursing is a prime discipline to address insufficient levels of physical activity among low-income adults. Future research can take a novel approach of incorporating nursing in the area of physical activity for low-income adults and shifting the focus to motivation rather than just barriers.

Box Breathing and the Surgical Stress Response: A Feasibility Study

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Purpose/Aim: This study aims to assess the feasibility of adding a Box Breathing intervention to postoperative care as usual (CAU) among older adults following total joint arthroplasty and to explore changes in surgical stress response (SSR) biomarkers.

Rationale: Postoperative complications are detrimental to patient well-being and create economic hardships for both patients and healthcare systems. Each year, approximately 310 million surgeries are performed worldwide. Of these surgeries, an estimated 20% of patients experience postoperative complications, translating to millions of individuals at risk for poorer outcomes, including death. Older adults (≥65 years of age) comprise nearly 40% of the surgical population, with an expected 10% increase over the next decade. Older adults are likely to endure more invasive surgeries than their younger counterparts. Invasive surgeries elicit an elongated physiological response from the body, or the surgical stress response (SSR), to maintain homeostasis, placing older adults at higher risk for postoperative complications. The SSR is the body's neuroendocrine-metabolic and inflammatory-immune response to surgery. Prolonged activation of the hypothalamic-pituitary-adrenal (HPA) axis and production of proinflammatory cytokines (including subsequent cascades) during the SSR contribute to pathological states that undermine optimal outcomes. Current research suggests breathwork techniques affect these physiological stress and immune responses by mediating the HPA axis and innate immune response through the sympathetic nervous system (SNS) and other neurological, endocrinological, and immunological pathways.

Methods: Design: A single-group quasi-experimental intervention study. **Sample and Setting:** Patients undergoing total joint arthroplasty (N=30) at a Level II hospital in the Northeast will be enrolled and receive a Box Breathing intervention plus postoperative CAU. **Measures and Procedures:** Feasibility measures will include study recruitment and retention, as well as intervention acceptability (AIM), appropriateness (IAM), and feasibility (FIM) assessed post-intervention (range=4-low to 20-high). To explore changes in SSR biomarkers, IL-6, CRP, TNF-α, and cortisol will be drawn preoperatively (T0), 30 minutes post-incision (T1), 60 minutes post-closure (T2), and 120 minutes post-closure (T3). **Intervention:** Participants will be guided in performing a 2-minute session of Box Breathing (inhale 4 sec, hold 4 sec, exhale 4 sec, hold 4 sec; repeat eight times) at T0, T2, and T3. **Analysis Plan:** Frequencies, percentages, 95% confidence intervals, and mean±SE for AIM, IAM, and FIM will be calculated. The mean changes in biomarker levels over time (T0, T1, T2, T3) along with the 95% confidence intervals will be calculated.

Anticipated Results: Although pending, the anticipated results will show the feasibility of study recruitment and retention, as well as the acceptability, appropriateness, and feasibility of Box Breathing in addition to postoperative CAU. Also, changes in SSR biomarkers are anticipated, indicating improvements in the SSR.

Implications and Future Research: The expected increase in older adults having invasive surgical procedures calls attention to the need for integrative approaches to combat the deleterious effects of the SSR and, in turn, postoperative complications. However, more conclusive information on how breathwork acts upon specific elements of the SSR that contribute to postoperative complications, as well as the feasibility of patients utilizing breathwork techniques postoperatively, are needed.

Hospital Staff Interactions with Chaplains to Discuss Personal Stressors

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Background: Hospital-based chaplains have a unique responsibility to provide spiritual and emotional support to patients and their loved ones, as well as to the staff caring for these patients. Healthcare staff experience stress from the workplace when providing complex patient care and often may lean on chaplains for support. Yet healthcare staff can also suffer from personal stressors that could impact care delivery. However, less is known about whether, how often, and which staff may interact with chaplains for emotional support when experiencing personal, non-work-related stressors.

Purpose: To describe the proportion of individuals who report discussing personal, non-work-related stressors with chaplains in the past 12 months, and to test for demographic and occupational differences between groups.

Methods: This is a secondary analysis of a cross-sectional, survey-based study conducted among staff employed in a large, multi-state, Catholic health system from February to April 2022. Variables analyzed in this report include demographics (sex, ethnicity, religious affiliation), occupational characteristics (shift worked, hospital bed size, hours worked, years of experience, critical care specialty, population of care, role type), and an item indicating frequency of chaplain interactions for personal, non-work-related stressors in the prior 12 months. Individuals were grouped as those who indicated at least one interaction with the chaplain for a personal, work-related stressor in the past year and those who indicated no such interactions. Descriptive statistics were conducted to calculate proportions, and a series of chi-square tests were tabulated to compare groups by the demographic or occupational variables.

Results: In our sample of 1376 individuals, a total of 372 (27%) of participants reported at least one interaction with the chaplain in the past year to discuss personal, non-work-related stressors. Of those reporting an interaction with the chaplain, the average frequency of interactions to discuss personal stress was between two to four times in the past 12 months. Bivariate testing revealed the following: staff reporting a Catholic or Protestant religious affiliation, working in a smaller hospital, working as a Registered Nurse or technical staff, and working day shift were all proportionally more likely to report discussing a personal, non-work-related stressor with a chaplain. Conversely, those reporting an atheistic or agnostic religious affiliation, working in a hospital of 500 bed or greater, working as a prescriber or therapy staff, and working night or evening shift were proportionally less likely to have reported discussing a personal stressor with the chaplain.

Conclusions: Our study supports that among staff working in a Catholic health system, more than a quarter report at least one interaction with a chaplain to discuss personal, non-work-related stressors. More research is needed to quantify outcomes associated with these interactions.

Implications for Practice: Chaplains may be viewed as valued, trusted members of the care team with special skill sets that may improve caregiver wellbeing beyond stressors encountered in the workplace. Healthcare staff may benefit knowing that chaplains are willing and available to assist staff's holistic spiritual and emotional care needs.

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Best Practices for Adult Ambulation in Hospital Setting

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Purpose/Objectives: Hospitalized patients are at risk for functional decline and associated consequences. While many outcomes exist to quantify the harm of immobility, there is considerable variability in practice regarding the amount, steps, and duration of ambulation to avoid the harm of immobility while hospitalized. The purpose of this study is to synthesize evidence regarding the frequency of ambulation for adult patients to produce positive outcomes.
Background/Significance: Mobility is often overlooked when other tasks seem more compelling in the amount of time nursing staff have to spend with patients. Evidence suggests that an interdisciplinary team working to establish a facility mobility program will decrease functional decline and reduce length of stay. Because mobility should be a standard treatment, evidence-based standard parameters should be created to guide the mobility programs.
Methods: PubMed was searched for articles using the terms adult, hospitalized, inpatient, ambulation, walking, frequency, length of stay, and falls. Additional articles were acquired from cited references. The search yielded 3392 studies. Fifteen studies were included in the final evidence summary and syntheses tables. Quality was assessed using the John Hopkins research evidence appraisal tool. The 15 study designs included RTCs, cohort studies-prognostic, prospective, and observational, quasi-experimental, a secondary data analysis, systematic review and meta-analysis, mixed method, quality improvement projects, and qualitative studies.
Outcomes/Results: Increased mobility demonstrates many positive outcomes. Increased ambulation reduces hospital acquired functional decline and decreases length of stay. Mobility programs are an effective way to increase the number of patient steps. Staff involvement in established facility-based walking programs have better outcomes in reducing hospital acquired functional decline and decreasing length of stay than areas without a program. Patients have increased motivation and compliance with mobility when staff are present and encourage mobility. While evidence supports increased mobility and walking programs, limited evidence regarding the desired frequency of ambulation exists.
Conclusions/Implications: Mobility programs with an emphasis on ambulation is associated with a reduction in hospital acquired functional decline and a decrease in length of stay. Successful mobility programs depend on strong leadership and nursing staff engagement. A change is needed in nursing protocols and culture to support endeavors to make mobility, especially ambulation, a priority. Further investigation into ambulation parameters may demonstrate a significant impact on financial expenditures related to these issues, as well as improve patient outcomes and satisfaction.

Naloxone Training & Overdose Prevention Program in Residential Addiction Treatment

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Purposes/Aims: The purpose of this project was to develop, implement, and evaluate a Naloxone Training and Opioid Overdose Prevention Program offered to residents at an addiction treatment center.

Rationale/Background: The United States is facing a growing drug overdose crisis, largely driven by opioids. In the United States drug overdose is a leading cause of injury mortality. Since 1999, more than one million people have lost their lives to drug overdoses. In 2021, 106,699 drug overdose deaths occurred in the United States. Over 75% of those deaths involved opioids. Research has consistently demonstrated that implementing Naloxone Training and Opioid Overdose Prevention Programs within high-risk populations constitutes an effective harm reduction strategy in addressing the opioid overdose crisis.

Methods: The National Harm Reduction Coalition's Guide to Developing and Managing Overdose Prevention and Take-Home Naloxone Programs and the Substance Abuse and Mental Health Services Administration's Opioid Overdose Prevention Toolkit were used to design a 45-minute nurse-led Naloxone Training and Opioid Overdose Prevention group for residential addiction treatment center. The interactive presentation encompassed a comprehensive discussion of overdose response and prevention, including the examination of overdose risk factors, recognition of overdose symptoms, steps to take when responding to an overdose, and guidance on the proper administration of naloxone. To facilitate learning, participants were provided with handouts and the opportunity for hands-on learning.

Assessment of Findings/Outcomes Achieved: The Opioid Overdose Knowledge Scale and Opioid Overdose Attitudes Scale were utilized to assess participants' knowledge and attitudes immediately before and one hour after the group intervention. A total of 16 ($n = 16$) residents attended the nurse-led Naloxone Training and Opioid Overdose Prevention Program. Total scores on the Opioid Overdose Knowledge Scale increased by 28% from pre-intervention to post-intervention ($p < 0.05$). Total scores on the Opioid Overdose Attitude Scale improved by 17.5% ($p < 0.05$). Subscales were also analyzed, revealing statistically significant increases in scores in the "signs" and "naloxone use" categories of the Opioid Overdose Knowledge Scale, as well as the "competence" and "concerns" sections in the Opioid Overdose Attitudes Scale ($p < 0.05$).

Conclusion: This project was aimed at addressing the escalating drug overdose crisis through the implementation of a nurse-led, evidence-based, harm reduction educational intervention. The project consisted of the development, execution, and evaluation of a Naloxone Training and Opioid Overdose Prevention Program offered to a high-risk population. The outcomes of this project highlight the effectiveness of such interventions in enhancing participants' knowledge and attitudes regarding opioid overdose and Naloxone use. This project has implications for the field of residential addiction treatment and may offer a valuable template for the establishment of effective overdose prevention and training programs in comparable settings. Residential addiction treatment centers provide an optimal environment for the application of evidence-based overdose response and prevention approaches.

Resilience in Traumatic Brain Injury: A Concept Analysis

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Aim: To examine the concept of resilience in the context of traumatic brain injury (TBI).
Background: Resilience fosters adaptation after TBI and is a crucial indicator of recovery and a key element in successful rehabilitation. However, despite being recognized for over two decades, resilience is a new concept that lacks clarity and has not been well-defined in the context of TBI. Resilience is also confused with the concept of coping. There is a need for further exploration of resilience within TBI to enhance the understanding and clarify the meaning of resilience and its contribution to patients with TBI.
Method: Walker and Avant's modified method of concept analysis was used to guide this analysis. Literature from multiple scholarly databases was identified keywords: "Resilience," "Psychological Adaptation," "Hardiness," and "Psychological Well-Being," which were imputed using established inclusion criteria: full text, peer-reviewed, and printed in the English language from 2013-2023. Eligible articles were examined to determine the context of resilience and to comprehend and analyze its attributes, antecedents, and consequences of resilience in TBI.
Outcomes: Antecedents included exposure to adverse events and a social support system. Two principal attributes consisted of personal traits and the adaptation process. Resilience can help enhance physiological and psychological health outcomes, improve recovery, and decrease complications among individuals with TBI.
Conclusion: Research in the TBI population is shifting from a deficit focus towards a strengths-based approach. This analysis contributes to a comprehensive and fundamental understanding of the resilience concept. With a firm knowledge of resilience, nurses can broaden interventions, application of theory, policy making, and research possibilities to advance health outcomes among individuals with TBI and their families.
Keywords: concept analysis, resilience, psychological resilience, psychological adaptation, traumatic brain injury

IN-LMC: DEVELOPMENT AND EARLY IMPLEMENTATION OF A NURSE-LED MOBILE CLINIC

In-LMC: Overview of Planning and Development of a Nurse-Led Mobile Clinic

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Purposes/Aims: The purpose of the Integrative Nurse Led Mobile Clinic project is to plan, implement, and evaluate a nurse-led mobile clinic that provides high quality, evidence-based health care to urban and rural underserved communities, while delivering exceptional learning experiences to RN/APRN students and improving health outcomes. IN-LMC integrates primary care and mental health services with focus on health equity, refugee health, mental health/ substance abuse, and unhoused persons. Our SON is part of an academic health system without a nursing faculty practice. This poster will describe the planning process, efforts to develop an infrastructure, obtain leadership buy-in, and other processes to get approvals to start the clinic.

Rationale/Background: In 2021, the Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity emphasized significant problems with access to care including the lack of insurance, inability to pay, and lack of clinics or providers in local geographic areas. Sacramento is surrounded by rural and underserved areas, is the 3rd most diverse county with one of the largest unhoused populations in the state. Access to primary care is a significant challenge in the state and our region. Sacramento rates of preventable hospital stays, premature death, smoking, sexually transmitted diseases, obesity, excessive drinking, and drug overdose deaths are higher than the California average.

Approach and Methods: We applied for and received a $4million HRSA grant to develop and implement a nurse led mobile clinic. Faculty workgroups planned for several months on the administrative, business, and clinical structures and processes necessary to establish the clinic. We faced and overcame several challenges such as making the business case, how to structure an academic faculty practice, obtaining appropriate permits, licenses, and accounts to purchase equipment and supplies, finding storage space, and establishing billing and collection practices.

Assessment of findings/Outcomes Achieved: In collaboration with health system leadership, we successfully created the infrastructure, built the business case, and established a team based, integrative primary care and behavioral health model. We became part of the mobile medicine service line so that the clinic could get off the ground. This required coordination across the entire health system to ensure we had comprehensive support for the project. We successfully created structures and processes needed to provide mobile health services to the unhoused population, while at the same time, continued to explore other populations of need such as refugee health, women's and children's health. We reached out to community partners to establish collaborations that would optimize our abilities to provide care.

Conclusions: In less than a year we have partnered with the health system to establish and pilot a mobile health clinic in which we expanded patient care capacity, refined systems, and improved access and continuity of care for a segment of the unhoused population. We incorporated many lessons learned, revising our processes along the way. Next steps are to expand to additional sites and to integrate learners.

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IN-LMC: DEVELOPMENT AND EARLY IMPLEMENTATION OF A NURSE-LED MOBILE CLINIC

In-LMC: Development and Early Implementation of a Nurse-Led Mobile Clinic

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Purposes/Aims: A key aim of the IN-LMC is to develop a nurse-led mobile clinic that provides high quality, evidence-based health care to urban and rural underserved communities. IN-LMC integrates primary care and mental health services with a focus on health equity, refugee health, mental health/ substance abuse, and unhoused persons. This session focuses on the early implementation of the clinic.

Rationale/Background: Homeless increased 68% in Sacramento County from 2019 to present and currently numbers around 9,300, making Sacramento County one of the largest unhoused populations in the state. Rates of preventable hospital stays, premature death, smoking, sexually transmitted diseases, obesity, excessive drinking, and drug overdose deaths are significantly higher than the California average.

Approach and Methods: We worked collaboratively with an FQHC partner and local agencies/shelters to establish our mobile clinic to provide care to Sacramento unhoused people. We joined local and international street and mobile medicine consortiums and met with local NPs who lead street medicine programs in surrounding counties. We adopted a team-based health approach including community case managers to coordinate care. We schedule appointments at specific sites where we have built trusting relationships with case managers. We started with a needs assessment for each site and used Maslow's hierarchy in our consideration of partnerships and services to focus on basic needs first. We developed the plan, engaged trusted collaborators, hired and trained staff, purchased equipment and supplies, and developed policies and procedures. Unique activities include relocation to safer sites for vulnerable patients, partnering with local a veterinarian and animal shelter for pet care and animal respite for patients needing hospitalization and connecting site coordinators with UCD students offering a literacy group to help with GED or health literacy.

Assessment: Using a continuous quality improvement approach, we conducted pilot testing, expanding and improving services to include addressing social determinants of health. We are providing mobile health services one day per week at different homeless encampments. We have expanded the services from seeing 4 patients to 14 patients per half day for primary care and increasing communication between case management and our staff. We assess patients to identify mental health needs, screen for infectious diseases, acute and chronic illnesses and to promote safety. Through collaboration with case management and site coordinators, we have refined our systems and improved continuity and coordination of care. Several challenges emerged along the way requiring rapid planning and response such as security, availability of medications and clean water, access to showers, pharmacy delivery services, need for social services, need for patient transportation, and improvement in communication.

Conclusions: In just 4 months, we have partnered with community groups and local site coordinators to establish a pilot mobile health clinic in which we expanded patient care capacity, refined systems, developed trust with patients and site coordinators, and improved access and continuity of care for members of the unhoused population. We incorporated many lessons learned, revising our processes along the way. Next steps are to expand to additional sites and to integrate learners.

IN-LMC: DEVELOPMENT AND EARLY IMPLEMENTATION OF A NURSE-LED MOBILE CLINIC

In-LMC: Patient and Process Characteristics, Logistics and Operational Planning

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Purposes/Aims: The purpose of this abstract is to describe the patient characteristics of the target underserved community and how logistic and operational planning have adapted to meet the unique needs of the patients. This experience can be leveraged by other institutions interested in starting a mobile clinic.

Rationale/Background: From 2017-2019 there was a 19% increase in homelessness in Sacramento County. It has been reported that the number of unhoused persons in camps has more than doubled since 2019, likely related to the pandemic, associated evictions, and increased housing costs. Adults experiencing homelessness are more likely to access acute care services and postpone preventative care and routine prescription medication use. Those reporting housing insecurity were 35% more likely to delay check-ups, 19% less likely to have a usual care provider (i.e., a primary care medical home), and have more days of self-reported poor physical and mental health than those without housing insecurity.

Approach & Methods: An informal site assessment tool was developed to evaluate sites for clinic operations and future planning. The tool focuses on safety, site resources, access to transportation, suitability to operate in all weather conditions, patient characteristics, and suitability for teaching. Site residents, case managers, and community organizations act as informants. Clinic flow was adapted to accommodate the outdoor environment, different services/service organizations providing care, and client. Obtaining prescriptions was identified early on to be a major barrier. A partnership with a local pharmacy was developed to allow for delivery and/or administration of prescribed medication. Clinic operations were supported by developing a supply chain management system utilizing QR codes, mobile tents and bin organization system with a focus on quick assembly/ disassembly and easy access to supplies. A Safety protocol was developed between clinic service organizations to allow for quick communication of any potential dangers.

Assessment of Findings/Outcomes Achieved: This mobile clinic is currently operating in two sites and serving 10-12 patients per half day of primary care. The site assessment tool was successfully used to evaluate the suitability of sites, identify potential challenges and planning for future needs, including inclement/winter weather. While providing mobile health services to the unhoused, we have established community partnerships to address the multifaceted needs of this population. These partnerships include Sacramento County Health Services, Community Healthworks, Communities First, Sacramento Steps Forward, public health nurses, veterinarians, literacy groups and pharmacies. Relationships with case managers were developed to enhance clinic utilization and care coordination.

Conclusions: In the first four months of clinic operations, we have identified specific patient characteristics and needs, established regular primary care services, veterinary services, prescription delivery, and coordination of care with clients and case managers. The next steps for the IN-LMC are to expand services into new sites, refine clinic operations, expand mental health care options, expand psychosocial support services, and incorporate learners into the clinic flow. The assessment tool along with the logistical and operational planning that we have implemented can be used by other institutions to create mobile clinics and improve access to health care in underserved communities.

IN-LMC: DEVELOPMENT AND EARLY IMPLEMENTATION OF A NURSE-LED MOBILE CLINIC

In-LMC: Mixed Methods Approach for Evaluating a Nurse-Led Mobile Clinic

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Purposes/Aims: The purpose of the Integrative Nurse Led Mobile Clinic (IN-LMC) project is to plan, implement, and evaluate a nurse-led mobile clinic and faculty practice that provides high quality, evidence-based health care to urban and rural underserved communities, while delivering exceptional learning experiences to RN/APRN students and improving health outcomes through timely and necessary medical care. IN-LMC integrates primary care and mental health services with focus on health equity, refugee health, mental health/ substance abuse, and unhoused persons. We are using a mixed method evaluation approach integrating process, output, and outcome measures.

Rationale/Background: The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity emphasizing significant problems with access to care including the lack of insurance, inability to pay, and lack of clinics or providers in local geographic areas. The INLMC utilized the county community health needs assessment to identify the populations with the most need. The findings showed that the unhoused rated high on the list with a population that is growing rapidly (67% from 2019 to 2022) mostly as a result of the housing affordability crisis in the state. Sacramento is also the 3rd most diverse county with rates of preventable hospitalization, premature death, smoking, sexually transmitted diseases, obesity, alcoholism, and drug overdose deaths that are higher than the California average.

Brief Description: The evaluation for the nurse led mobile clinic is a multipronged (quantitative and qualitative) approach and includes individual learners, staff, and faculty, mobile clinic team processes and outcomes, and patient population health outcomes; we are also integrating rapid cycle quality improvement (RCQI) . Patient data, care coordination, continuity of care, chronic disease management, learner outcomes (clinical experience/exposure number of hours at clinic, improved health equity training, feedback), and health care team measures (total number of visits, prescriptions, medical diagnoses, SDOH issues addressed, referrals) will be collected and analyzed.

Assessment of Findings/Outcomes Achieved: Currently, we collect data that focus on the refugee and unhoused populations through intake screenings that integrates RCQI for real-time assessment at hosted sites. The nurse-led mobile clinic staff are equipped to assess and respond to unmet healthcare and social needs, while building capacity to strengthen collaboration with local agencies such as churches, shelters, unhoused encampments to a wider network of resources. Themes and subthemes were identified such as addressing social determinants of health (SDOH), increasing healthcare access, improving health outcomes, advancing population health, limitations of mobile health clinics. A mixed method evaluation using qualitative and quantitative methods, process evaluation for program improvement using focus groups, interviews and surveys, and outcome analysis. We will begin measuring outcomes on individual (student and faculty), healthcare team (HCT), and the program imminently.

Conclusions: The nurse led mobile clinic (IN-LMC) operates in environments that bridges community-based and clinical settings that improves health outcomes further than individual level. In addition to addressing the community need, IN-LMC optimize learning experience that introduce students to provide patient care and educate on chronic illness and infectious disease management.

Funding: This project was 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 1 UK1HP46120 totaling $3.56 million 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, HHS or the U.S. Government.

Developing Sex-Specific Nomogram Prediction Models for Low Bone Mineral Density Risk

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Purposes/Aims: To facilitate health equity in early identifying people at risk of osteopenia in the Asian population, especially in the Chinese population, the purpose of this study was to develop novel sex-specific nomogram models for predicting people at risk of low bone mineral density by using an existing population-based dataset from Taiwan.

Rationale/Background: Early identification of osteopenia or osteoporosis is critical to people to increase awareness of potential adverse health impacts related to low bone mineral density and arrange effective management to improve their bone health. Sex hormones in men and women change throughout life and the role of sex hormones in bone metabolism is established. Racial differences in bone mineral density are also well-documented; studies showed that Asian populations demonstrated lower bone mineral density in comparison to Caucasians.

Methods: A study cohort (N=23120; 15138 females and 7982 males) was requested from the Taiwan Biobank database. The requested data, collected between October 2015 and October 2022, included participants' self-report data (e.g., sex, age, marital status, body weight, regular exercise habit) and T-score of bone mineral density. A binary outcome variable (at risk vs. not at risk of low bone density) was created using the T-score; less than -1 was considered as low bone mass, including osteopenia and osteoporosis. The women and men datasets were randomly divided into training and testing data in a 70:30 ratio, respectively. The multivariable logistic regression models were built on the training data and then validated on the testing data. Nomograph prediction models were constructed based on the regression results and validated through the area under the receiver operating characteristic curve (AUC). An AUC of 0.6–0.7 indicates sufficient predictive ability, and an AUC of 0.7–0.8 indicates good predictive ability.

Outcomes Achieved: Multivariate logistic regression analysis indicated that age [odds ratio (OR)=1.06], without menstruation (OR=2.23), without regular exercise (OR=1.36), body weight (OR= 0.98), body fat rate (OR=0.98), and education less than 9th grade (OR=1.18) were significant risk factors for low bone mineral density in women. The analysis also indicated the following predictors for the risk of low bone mineral density in men: age (OR=1.04), without regular exercise (OR=1.55), body weight (OR=0.99), and current alcohol use (OR = 1.22). Sex-specific nomogram prediction models for women (Figure 1) and men (Figure 2) were established based on the results of the multivariate logistic regression analyses. Finally, the AUCs of testing data for women and men were 0.76 and 0.61, suggesting a good and sufficient performance, respectively.

Conclusion: Chinese women and men need different prediction models for the risk of low bone density. The findings reveal knowledge to enhance bone health equity and help clinicians identify people at high risk of low bone density early. Nomogram prediction models provide graphical depictions of all significant predictors in the model and enable the user to efficiently compute and interpret the risk probability of low bone density. Future research will be needed to verify the usability and develop interventions derived from the nomogram models for risk prediction of low bone mineral density.

Telehealth Satisfaction and Compliance - Pre and Post COVID-19

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Purpose: Evaluate patients' satisfaction and compliance with telehealth visits pre- and post-COVID-19.

Background: Telemedicine consists of the virtual sharing of healthcare information and the provision of medical care over geographical distances. Although this may seem like a new concept to many, telemedicine has been in use to effectively diagnose and treat illnesses since 2013. In recent years telemedicine has gained momentum since the COVID-19 pandemic. Currently, there is limited research regarding telemedicine adherence and satisfaction pre-and-post COVID-19.

Methodology: A descriptive, exploratory, quantitative design was applied in this study. The research was obtained through an online survey utilizing Qualtrics. Individuals were recruited through social media, Facebook, Instagram, and email. Participants were given a link or a QR code to access the survey. A total of 75 people living in Kern County participated in the study, 9 males and 66 females older than 18 years old, the largest group being the 46-64 age range. The study measured their overall use and satisfaction with Telemedicine before, during, and after the COVID-19 pandemic. Statistics from the survey were analyzed for data.

Results: Of the 75 participants who completed the survey, 90.67% were between 18 and 64 years old, and 88% identified as female. The majority of participants had some form of formal education. Only 32% of participants had a chronic illness. In terms of satisfaction with in-person doctor's visits before COVID-19, 96% of participants reported being satisfied. Although telemedicine is not a new concept, 80% of patients did not utilize telehealth services before COVID-19. In contrast, 84% of participants reported using telemedicine during the pandemic. Additionally, 66.67% of participants have continued to use telehealth services after the lockdown. When asked about satisfaction with telehealth services during the pandemic, 90.67% reported being satisfied. Adherence was favorable, with 90.66% of participants reporting the likelihood of adhering to telemedicine appointments. When asked how telehealth visits compared to in-person office visits, 58.67% reported telehealth to be just as good. Twenty-three participants, or 30.67%, reported telehealth visits to be worse. Only 10.67% reported a better experience with telehealth visits compared to in-person visits. Ultimately, 62.67% of participants still favored in-person office visits rather than telehealth visits for future appointments.

Nursing Implications: The study's findings indicate that telehealth is a favorable option for healthcare delivery. Nursing involvement and education can lead to higher levels of patient satisfaction, which in turn can lead to an increase in the utilization of telehealth. An increase in telehealth will promote patient compliance and help minimize the predicted increase in chronic illnesses among those who have restricted access to healthcare due to transportation difficulties, time constraints, or a lack of availability of specialty care in the local region.

Reliability of Artificial Intelligence: An Evidence-Based Practice Activity

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Purpose: The purpose of this pilot learning activity is for learners to examine the potential benefits and limitations of using generative artificial intelligence (AI) as a tool for providing evidence-based recommendations. This activity takes place in an evidence-based practice (EBP)/ informatics course, which is delivered asynchronously online in a nursing baccalaureate completion program. Learning objectives are:

1. Compare and contrast AI-generated recommendations with those found in a library database search.
2. Critique the practice of using AI-generated responses for nursing practice recommendations.

Rationale: While AI is not new to health care, large language models, such as ChatGPT, have recently erupted, bringing with them the potential to augment clinical practice and research. Clinicians are using generative AI for a spectrum of tasks, ranging from diagnostic queries to complex care planning. The 2020-2030 Future of Nursing Report recommends incorporation of nursing expertise in innovative technologies, including AI. However, generative AI has limitations and ethical considerations. Chatbots can provide incorrect and biased information, requiring nurses to critically appraise results. Nursing students must appreciate the ability of AI to complement their nursing skills while understanding the importance of evaluating the reliability of AI-generated content.

Approach: Using the 5E Instructional Model as the student-centered, inquiry-based pedagogical approach, students undertake this learning activity through engagement, exploration, explanation, elaboration, and evaluation. An instructional designer with expertise in AI application in academia provided consultation on implementing the learning activity.

Methods: Prior to the learning activity, students have worked through the inquiry, search, and appraisal phases of evidence-based practice. In this activity, students generate responses from AI to answer their clinical question.

First, students respond to an anonymous poll (embedded in the course website) about previous experience with generative AI. Next, students pose their clinical question to an AI chatbot, following up their question with suggested prompts for the chatbot. Students compare the findings from generative AI with evidence found in their library database search and offer an appraisal of the AI-generated recommendations.

Assigned reading about AI in nursing include the American Nurses Association (ANA) position statement on AI and videos about how to use generative AI tools to build students’ knowledge on the topic. Students then write a reflection paper, including appraisal of the AI responses, potential applications of AI in their practice, and limits of generative AI for practice recommendations.

Assessment

Upon completion of the learning activity, we will first review the reflections to assure that this activity meets the learning outcomes. As part of the reflection paper, students are prompted to reflect on their change in knowledge or attitudes about AI. Reflections will be reviewed for learning themes.

Conclusions: After completion of the first undertaking of this learning activity, we intend to make iterative changes based on student reflections. This course is offered to incoming students each term. Next term, after exploring themes, we aim to create a space for collaborative discourse on this topic using provocative discussion questions. We anticipate ongoing adaptation of this activity as AI tools rapidly evolve and integrate into nursing practice.

Real-Time Visual Graphical Charting: Will It Decrease ICU Documentation Burden?

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Purposes/Aim: To evaluate if critical care clinicians will have a reduced documentation burden while using a tablet in real-time that graphically displays the patient's medical equipment on the electronic health record (EHR) application.

Background: Clinicians often perform a vast amount of documentation when completing healthcare-related tasks. They assess patients and related medical equipment before documenting their findings in the EHR. EHRs tend to have similar spreadsheet-style data entry fields that require the clinician to search for multiple rows, columns, and cells for each body system. Additionally, clinicians must perform this task numerous times per shift for each body system for each patient in their care. This ineffective workflow and labor-intensive process increases the documentation burden and contributes to clinician burnout.

Methods: *Design a Visual Graphical Charting Application (VGCA) Prototype on a Tablet:* A prototype tablet VGCA, intended for bedside clinician use, will be designed and tested. The VGCA will show the clinician the position of the equipment in the patient's room (i.e., IV pumps, ventilator, monitor, etc.). At each assessment interval (e.g., every 1 hour), an equipment icon turns yellow when due for assessment. The clinician will tap each equipment item to document their assessment findings. Upon completion of the clinician's assessment, the icons turn green, and the data will be transmitted securely to the facility's EHR via a secure data transfer standard (Fast Healthcare Interoperability Resources; FHIR).

Anticipated Study Design: Testing the VGCA prototype will be via a usability evaluation of twenty recruited clinicians, randomized into two groups of ten. Each clinician will receive training on how to use the prototype. Group one will document their assessment using the prototype and repeat it using their facility's currently-in-use EHR. Group two will document their assessment using their facility's currently-in-use EHR and repeat it using the prototype.

Data Collection: In addition to usability metrics, other data will be collected from each clinician: documentation time using each EHR, the number of years of ICU experience, their perceived comfort level using each method of documentation being tested, age and gender of the clinician, time of day, satisfaction scores with the prototype and their facility's EHR, patient acuity score.

Anticipated Results: Pending approval. It is anticipated that the VGCA will reduce the average time to document when compared to the average documentation time when using the facility's in-use EHR. The prototype will progress to formal EHR plugin development if this study shows favorable results.

Conclusions/Implications: If successful, the use of a VGCA could improve the clinicians' experience and efficiency of documentation in the EHR. Because EHR usability negatively impacts documentation burden and burnout, designing and evaluating the usability of the VGCA is a first-step in a program of research to use informatics to improve the user experience of nurses. Future studies will involve simulation testing to assure documentation accuracy and testing the flow of information from the tablet to the EHR to assure data integrity.

Can Infographics Improve Clinical Communication with Latino Persons with HIV?

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Rationale/Conceptual Basis/Background: Latinos are the largest minority group in the United States (US) and they are disproportionately affected by HIV. A potential contributor to this disparity is low health literacy, which can lead to difficulty acquiring and understanding health information. Further, cultural perceptions of illness, as are likely among unique ethnic groups, can alter patients' willingness to accept diagnoses, follow medical advice, and adhere to prescribed treatments.

To help clinicians overcome these challenges in offering care to Latino persons with HIV (PWH), our team developed an infographic intervention, tailored to heterogeneous Latino groups, and meant to support clinical HIV-related communication. As part of our recent multi-site Randomized Controlled Trial to assess intervention efficacy, we interviewed treatment group participants from both sites to explore perspectives toward HIV-related clinical communication and infographic use.

Purposes/Aims: To develop an in-depth understanding of clinical HIV-related communication with Latino PWH and how it might be affected by clinician's use of tailored infographics.

Methods: We recruited adult (≥18 years) PWH who self-identified as Hispanic/Latino and spoke English or Spanish from two clinics specializing in HIV care (Dominican Republic and Colorado, US). At enrollment, participants were randomly assigned to a treatment or control group. Study clinicians (physicians and advanced practice nurses) then used infographics to guide patient education during the first three of four study visits with treatment group participants. At study end, ½ of treatment participants completed in-depth interviews in their preferred language. Guided by qualitative descriptive methodology, interviews followed a semi-structured interview guide, developed with established methods, with questions to elucidate participant's perspectives of clinical communication. Interviews were audio recorded and professionally transcribed verbatim in the language of the interview. We used conventional content analysis to inductively code transcripts and identify emergent meaning. Four researchers iteratively developed a codebook which guided coding. We used established strategies to enhance rigor and translated representative quotes of findings to English.

Findings/Outcomes: A majority of in-depth interview participants (N=34; Dominican n=18; Colorado n=16) identified as male (61.8%), and 35% identified as mixed race, 32% as white, 24% as black, and 9% as other race. They had an average age of 43.4 years (SD±11.7) and had been living with HIV for an average of 9 years (SD±8). Qualitative coding uncovered three main themes: 1) there are numerous barriers and facilitators to effective HIV-related clinical communication; 2) using infographics may or may not improve communication, depending on the patient; and 3) infographics improve health education and patient understanding of complex concepts. Findings were consistent across sites and languages.

Conclusions/Implications: Participants identified several barriers and facilitators to effective communication with Latino PWH, which can inform how clinicians communicate with this, and similar, populations. Additionally, participant's clear indication that infographics' influence on communication depends on the patient provides further evidence that patient-centered communication is crucial. Further, participants overwhelmingly indicated that infographics are a useful tool to improve education and understanding of intended information, warranting further development and evaluation of this intervention as a way improve health outcomes among Latino PWH.

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Nurses' Risk Tolerance and Perceptions of Risk Factors for Patient Violence

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Background: Exposure to risk is an inherent part of nursing and exposure to patient violence is one of those inherent risks. Patients are the most common perpetrators of violence towards nurses and the Occupational Health and Safety Administration has identified organizational, patient, and setting specific risk factors for violence in healthcare organizations. Identification of risk factors is important in strategizing ways to prevent, mitigate, and recover from instances of patient violence. It is not known if practicing nurses' perceptions of risk factors for patient violence align with empirical evidence. Additionally, the adoption of "zero tolerance" policies have become common administrative responses to violence in healthcare settings. There is no available data regarding nurses' tolerance to risk while at work. In order to assess nurses' risk tolerance a self-report risk tolerance scale was developed for use in this study.

Purpose: The purpose of this analysis was to examine hospital-based nurses' frequency of exposure to patient violence, expectations regarding exposure to patient violence, patient medical, personal, and clinical risk factors perceived to be associated with an increased risk of violence, and self-reported risk tolerance.

Methods: This study used a cross-sectional, descriptive design. Data was collected from 433 practicing nurses via electronic survey.

Findings: Most respondents reported exposure to physical patient violence a couple of times per year or less often. Alcohol intoxication/withdrawal and dementia/Alzheimer's were the top diagnoses associated with risk for violent behavior, and fear and impulsivity the top clinical characteristics associated with risk for violent patient behavior. More than one-third of respondents perceived age, gender, and socioeconomic status to be associated with increased risk for violent patient behavior. Based on the cut-point set for risk tolerance, 97% of respondents were categorized as having high risk tolerance. No participants with a low risk tolerance felt it was possible to prevent violence in hospitals. A greater proportion of males than females reported that nurses should expect to be exposed to patient violence.

Conclusions: It is important to fully understand the complexities of nurses' perceptions of work-related risk and their tolerance to occupational risk when exploring ways to prevent, mitigate, and respond to events such as violent patient behavior. While respondents' perceptions of clinical risk factors for violent patient behavior align with empirical evidence, many nurses also associated personal characteristics with an increased risk for violent behavior that have not been reported in the literature. These perceptions may be indicators of biases nurses have towards certain patients and are worthy of further exploration. While the development of a risk tolerance scale was a preliminary step in assessing the phenomenon among nurses, results do provide baseline information, particularly that practicing nurses may have a high tolerance for occupational risk exposure. Important next steps could be to investigate the factors that nurses consider salient when making decisions related to different types of occupational risk, how does nurses' risk tolerance impact behavior and perceptions of safety, and what is the effect of the sociocultural work environment on nurses' risk tolerance?

INSTRUMENT DEVELOPMENT

Psychometric Testing of the Nursing Perceptions and Practices about Delirium Scale

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Purpose: The aims of this study were to a) develop the Nursing Perceptions and Practices about Delirium Scale (NPPDS) for assessing nurses' perceptions, nursing practices and perceived barriers about delirium assessment and management on medical-surgical units in acute care hospitals, and b) test the psychometric properties of the NPPDS tool.

Background: Delirium in hospitalized patients is a clinical syndrome of great concern, affecting approximately 7 million hospitalized patients. It has adverse impacts on patients, families, and healthcare organizations. Patients experiencing delirium are at increased risk of extended length of hospital stays, higher mortality rates, and non-home discharge dispositions. Nurses play an essential role in delirium prevention and management. It is important to understand nursing perceptions and practices regarding delirium assessment and intervention. Although delirium often occurs on both Intensive Care Units (ICU) and medical-surgical units, existing delirium studies typically focus on ICU nurses. There is no valid instrument for assessing the perceptions and practices of medical-surgical nurses in caring for patients with delirium.

Conceptual Framework: The adapted systems engineering initiative for patient safety (SEIPS) model was used to develop the structure of the NPPDS tool. According to the SEIPS model, the work system has five interactive components (person, tasks, tools and technologies, physical environment, and organizational conditions). In caring for patients with delirium, nurses perform nursing assessment and intervention tasks using various tools and technologies, including delirium assessment tools, in ICU or medical-surgical environments and under specific organizational conditions. Organizational support will facilitate the nursing process for caring for patients with delirium and promote positive patient outcomes.

Methods: We developed the NPPDS items based on an extensive literature review of relevant studies and expert opinions. We checked the content validity of the tool by utilizing expert opinions. A panel of experts, including a nurse scientist, a clinical nurse specialist, a bedside registered nurse, and two psychiatrists, evaluated the NPPDS items for content relevance, clarity, and importance. After we finalized the NPPDS tool, we administered the tool through an online survey to medical-surgical nurses in a local healthcare system for psychometric testing. All data was collected online through Research Electronic Data Capture (REDCap®).

Assessment of Findings: We will test construct validity and reliability of the NPPDS tool. To test construct validity, we will conduct exploratory factor analysis to assess the underlying constructs and structure of the instrument. We will assess the internal consistency by calculating Cronbach's alpha. All statistical analysis will be conducted using Statistical Package for the Social Sciences (SPSS) version 28.

Implications: The study will enable us to test the reliability and validity of the NPPDS tool. The study will potentially benefit future research via development of a reliable and valid instrument for assessing perceptions and practices of nurses who care for hospitalized, medical-surgical adult patients. The study results may inform institutional leaders of important knowledge gaps related to delirium care and may be used to guide intervention, such as targeted nursing staff education and training.

Understanding Clinical Teaching Among Staff Nurses: Development of Interview Guide

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Purposes/Aims: The purpose of this initiative is to provide a series of steps for developing a semi-structured interview guide for research with acute care staff nurses who engage in clinical teaching of nursing students. The interview guide is to provide direction and support to a focused ethnography of exploring and understanding the interactions of the acute care learning environment and the enculturation of nursing students from staff nurses. Drafts of interview guides were developed and piloted to gain clarity on collecting data to support the research question to result in a final interview guide.

Background: The traditional clinical education model in nursing has utilized on-site learning experiences in clinical settings with patient encounters. With the growing complexity and demands of contemporary nursing care today, it is imperative to question the principal assumptions that guide the design and use of traditional clinical teaching experiences. Staff nurses working with nursing students can illuminate the impact of sociocultural workplace factors on clinical teaching and learning when preparing students for practice. Yet there is little known about staff nurses' perspectives of nursing culture and how enculturation prepares nursing students for the profession. By understanding the perceptions of enculturation among practice experts who teach nursing students in clinical environments, nursing professionals would gain insight about the culture of nursing and its effect on clinical teaching.

Methods: An initial interview guide was developed using a review of literature and expertise of nurse educators in academia to capture appropriate qualitative data for the focused ethnography. The first pilot of semi-structured interviews was conducted among 4 staff nurses who currently work with prelicensure nursing students on an acute care unit. After the first pilot, revisions to the interview guide were made to produce a second draft using feedback from debriefs of interviews and guidance from additional qualitative nurse researchers. The second round of pilot interviews were completed with two staff nurses, providing additional data. Interview data was coded and analyzed using content analysis for emerging themes to revise the interview questions, to result in a final semi-structured interview guide.

Assessment of Findings/Outcomes Achieved: Initially, a 13-item interview guide draft was created and piloted then refined based on preliminary data. Pilot interviews demonstrated that staff nurses focused heavily on their own feelings about teaching rather than what they perceive to be valuable principles taught to nursing students. Given that the focused ethnography centralizes on exploring values, principles, and relational dynamics between the staff nurse and nursing student, modifying the interview questions was needed. Results from this study produced an interview guide that contains seven questions that ask the staff nurse about their experiences when teaching nursing students, identifying the valuable principles taught to students by staff nurses, distinctions of nursing taught to students by staff nurses, and how they may impact a nursing student's overall learning.

Conclusions: The interview guide developed will be used as a foundational tool to better understand staff nurses' perceptions of vital aspects of clinical education in preparing nursing students for nursing practice.

INSTRUMENT DEVELOPMENT

Validation of Social Isolation Short Form in Patients with Head and Neck Cancer

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Purpose: To explore the feasibility, validity, and reliability of a Chinese version of the Patient-Reported Outcomes Measurement Information System short-form v2.0-social isolation 8a (PROMIS-SI 8a) in patients with head and neck cancer (HNC).

Background: There were 148,344 new HNC cases and 78,554 HNC deaths in China in 2022. HNC and its treatments may result in damage to facial structures and functions. HNC is frequently associated with significant disfigurement leading to reduced social interactions and possible isolation. Such outcomes of HNC treatment have been correlated with poor clinical outcomes. To improve health, it is important to understand the impact of social isolation on health outcomes. The PROMIS-SI 8a is a concise, standardized measurement tool to evaluate patients' social isolation levels. It has been widely used to measure health outcomes in different cultural groups. However, it remains to be validated in Chinese-speaking patients diagnosed with HNC.

Methods: The translation of PROMIS-SI 8a to Chinese was authorized by the PROMIS National Centre-China. Cognitive interviews were undertaken within 17 target participants. Eligible patients were those who had been histopathologically diagnosed with HNC, had surgery, and had at least one-month postoperative recovery. The Chinese version of PROMIS-SI 8a is comprised of eight items demonstrating a unidimensional structure. Each item is scored on a 5-point Likert scale. Scores range from 8 to 40, higher scores indicate greater social isolation. Using a cross-sectional design and convenience sampling, a psychometric evaluation of the PROMIS-SI 8a was conducted in a hospital with a 200-bed oral and maxillofacial surgery unit in Shanghai, China from October 2021 to August 2022.

Outcomes: Of the 230 questionnaires that were distributed, 201 were completed for a response rate 87.4%. Reasons for not completing included lack of time and missing information. The confirmatory factor analysis demonstrated a good model fit [$c^2 = 45.693$, $df = 19$, CFI = 0.968, TLI = 0.952, SRMR = 0.018, and RMSEA = 0.084 (*90% CI* 0.053–0.115)]. The PROMIS-SI 8a also showed good criterion validity ($r = -0.550$, $P < 0.001$) and known-group validity ($Z = -3.233$, $P < 0.05$). Results demonstrated acceptable measurement invariance across genders. The Cronbach's alpha was 0.892, and the half-split reliability was 0.876, indicating that PROMIS-SI 8a has good reliability. Additionally, there was no ceiling effect; however, there was a floor effect. This implies that PROMIS-SI 8a works better for assessing severe social isolation but is less effective for assessing mild social isolation.

Conclusion: The Chinese version of PROMIS-SI 8a has good psychometric characteristics. Therefore, it is an appropriate tool for the measurement of social isolation levels in patients with HNC. Because it is a simple 8-item tool it can be administered to patients in clinics, ambulatory care centers and in the home. As such it may be useful to identify patients experiencing social isolation. Working with the health care team and families, strategies can be planned and tested to reduce social isolation and subsequently improve quality of life.

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Nurses’ Perception of a Pediatric Cardiac Arrest Prevention Bundle Implementation

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Background, Significance, & Purpose: The bedside nurse is critical in preventing cardiac arrest (CA) in post-operative cardiac patients in pediatric intensive care units (PICU). The purpose of this quality improvement (QI) project was to measure nurses’ perception of the implementation of a cardiac arrest prevention (CAP) bundle, shown to reduce CA rates, within a PICU in an academic medical center in the Northwestern United States.

Methods: This QI project utilized a quantitative descriptive design which compared pre-implementation (PRE) and post-implementation (POST) surveys after implementation of the CAP bundle to measure impact on nursing interventions to prevent CA in post-operative cardiac patients. Initial data was collected by the CAP team, subsequently POST data was collected and compared. Questions were asked to measure nurses’ perceptions on intervening before arrival of medical providers, inclusion in management plans, and awareness of ECMO candidacy. A 4-point Likert scale was used for the majority of the questions. The POST survey was conducted three months after implementation to measure nurses understanding their patient’s risk of deterioration. University IRB determined as QI project.

Results: Comparing PRE (*n*=46) and POST (*n*=37) survey data revealed more nurses reported they “always” or “mostly always” were aware of a mitigation plan for decompensation POST (*n*=30, 83%) to PRE (*n*=6, 14%). This included being involved in plan-of-care discussions POST (*n*=24, 67%) to PRE (*n*=12, 27%), aware of patient’s ECMO candidacy POST (*n*=26, 70%) to PRE (*n*=3, 7%), and more prepared to care for a decompensating patient POST (*n*=35, 95%) than PRE (*n*=37, 84%). In the POST survey, nurses (*n*=36, 97%) reported the CAP bundle helped them understand their patient’s risk for decompensation better. Overall, the post-survey revealed nurses (*n*=35, 95%) reported being more prepared to care for a decompensating patient POST than PRE (*n*=37, 84%). In the POST survey, nurses (*n*=36, 97%) reported the CAP bundle helped them understand their patient’s risk for decompensation better. Nurses’ responses to the open-ended question provided narrative confirmation of the favorable feedback regarding the CAP implementation. For example, one nurse wrote “this helps me feel more prepared when caring for cardiac patients.” Similar responses included: “I love the vital sign parameters so RNs may be more proactive with initiating life saving measures for high-risk patients,” and that the bundle “helps me be a part of better team collaboration.”

Conclusion: Implementation of the CAP bundle was successful in empowering PICU nurses to intervene with a deteriorating patient sooner. We were encouraged by the overwhelmingly positive post-surveys. Additional surveys will be conducted over the next 6 months to determine if the positive impact is sustained.

Championing the "ME" in Treatment: Quality Improvement in Inpatient Behavioral Health

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Purposes/Aims: The aim of the quality improvement project was to increase patient involvement in inpatient behavioral health treatment planning as evidenced by an increase from 0% to 75% in the number of treatment plans with a documented direct patient quote stating the patient's specific, measurable, attainable, relevant, and timely (SMART) long-term and short-term goals for psychiatric treatment. The sub aim was for greater than 75% of patients to report *agree* or *strongly agree* regarding satisfaction with their level of involvement in their treatment planning process.

Rationale/Background: A systematic review found that patients perceive a greater level of involvement when shared decision-making (SDM) is incorporated into treatment planning, which in turn supports self-efficacy and the associated benefits. SDM strengthens patient autonomy, reduces coercion, increases patient satisfaction with treatment, increases patient's perceived involvement, and facilitates adherence to treatment. A needs assessment conducted in a four-unit inpatient behavioral health department within a community hospital identified that daily Treatment Team meetings lacked key contributors, such as the patient's primary nurse and the patient, that patient and team-driven goals were not aligned, and treatment planning goals did not meet regulatory requirements.

Brief Description of Best Practice: Shared decision-making is a collaborative process between the treatment team and the patient, and patients often prefer SDM. SDM has become a staple in models of care and best practice guidelines supporting the patient-centered domain of healthcare quality. The framework guiding this quality improvement project was Albert Bandura's Self-Efficacy Theory, a social cognitive theory positing that an internal locus of control, or self-control, enhances a person's commitment to goals, improves health functioning, and produces favorable health outcomes.

Outcomes Achieved/Documented: Treatment team meetings previously held in an off-unit location isolated from the inpatient units now occur on the inpatient units. This change allows for unit nurses, techs, and patients to attend and actively participate in the treatment planning process. Interventions included staff education on SMART goal criteria, flyers and tip sheets on SMART goals to be used by patients and staff, modification of the electronic health record to increase accessibility to goal documentation, reading aloud each patient's goals during Treatment Team daily meeting supported by scripting, and designing a process for patients to attend Treatment Team meetings to discuss goals and treatment planning. Directly quoted SMART goals increased from 0% to a peak of 84% of treatment plans. Patient satisfaction was equal to or greater than 80% throughout the duration of the project.

Implications for Nursing Practice/Research: Findings from this quality improvement project may inform strategies to promote SDM and increase patient satisfaction on inpatient behavioral health units. The qualitative feedback from the project from multiple disciplines emphasized the importance of nurse involvement in the treatment planning process. Nurses are better able to align their practice with the rest of the team and facilitate patient involvement in treatment planning. Future research is needed to explore causal relationships between specific patient health outcomes, such as readmission rates and symptom management, with the utilization of SMART goals during inpatient behavioral health treatment.

Generational Differences: Not Your Mother's Integrated Behavioral Health Practice

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Purpose: The purpose of this study is to examine how generational differences among integrated behavioral health (IBH) teams impact the overall quality, value, and outcomes of mental health services. Our objective is to identify generational characteristics among the five practicing generations of IBH providers to determine if similarities or differences among generational characteristics effect interpersonal relationships and practices within the healthcare setting.

Specific Aim: To describe if generational differences in the IBH workplace influence the dynamic of the IBH team, patient-provider relationship, and delivery of mental health services.

Background: Globally, poor mental health and depressive disorders along with medical comorbidities are correlated with high levels of disability and overall increased healthcare cost compared to those without medical comorbidities. Accessing services for mental health care in the United States can be difficult, particularly for those with multiple medications, complex health histories, and those experiencing racial and ethnic disparities. For some individuals, IBH teams can facilitate improved access to care.

The current healthcare workforce in the United States encompasses professionals from different generations, each of which are comprised of their own values, characteristics, and attitudes. These differences may cause conflict within the IBH setting, resulting in disruption of patient care and jeopardizing patient health outcomes. Therefore, understanding how each generation within the IBH team communicates and responds to patient care is essential to recognizing potential barriers to care among those with mental health concerns.

Methods: Utilizing a quantitative descriptive approach, we created a 29-question survey to be distributed through Qualtrics. The survey includes questions related to demographics, values, beliefs, and experiences related to patient care, as well as how the IBH work environment may be impacted by generational differences. The survey was developed following the Checklist for Reporting Results of Internet e-Surveys (CHERRIES) guidelines and was beta-tested by individuals in the field of behavioral health and nursing (n= 10) to determine usability and feasibility prior to distribution. The survey will be distributed utilizing provider listservs and social media adds on Facebook, Instagram, Snapchat and LinkedIn.

Data for both completed and early terminated surveys will be analyzed using Intellectus Statistics. Descriptive statistics, including measures of central tendency, standard deviations, frequency counts and percentages will be used.

Assessment of Findings: It is anticipated that surveys will be distributed during the month of November, with data analysis completed by February and a manuscript poised for submission by April.

Implications for Practice: Integrated behavioral health teams are a key solution to improving access to care for those with mental health and depressive disorders. However, the complexity of alterations in values, characteristics and practice based on a provider's generational standing may impede the efficacy of the IBH team. This study aims to assess for generational-based differences in an effort to better understand barriers to care for those who utilize care through the IBH model.

Hang on for the Ride: Implementing an Individualized Response to Suicide Risk

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Management of suicidal ideation (SI) is a complex area of nursing and a focus point for accreditation agencies. At our institution we observed a 90.2% increase in suicidal persons in the ambulatory care setting from 2021 to 2022. We identified that there were limited resources to support patients and staff, and a lack of evidence-based guidelines for patients with suicidal ideation. A multidisciplinary group was formed to enhance current resources and develop a comprehensive response to patients expressing suicidal ideation. Aims of this project were improving patient care, improving staff satisfaction, preserving patient relationships, and maintaining staff and patient safety.

Define, measure, analyze, improve, and control (DMAIC) methodology guided this practice optimization. The project took place across several regional sites and specialties that serve patients on a global scale. Needs and strategies were identified through event reporting, an all-staff survey, end user focus groups, a gap analysis of the National Patient Safety Goal 15 requirements, and an impact/effort matrix.

Originally staff experienced discomfort in providing care because most patients were referred to the National Suicide Hotline, regardless of symptoms reported. Early workflows lacked individualized interventions and patient risk stratification. Patients reported dissatisfaction with inappropriate interventions and nurses and providers were concerned about maintaining patient relationships. Utilization of the Columbia-Suicide Severity Rating Scale (C-SSRS) screening tool including risk stratification was instrumental to update previous workflows. From a comprehensive literature review, we incorporated evidence-based interventions for low, moderate and high-risk patients. Key stakeholders in the project included Quality, Physicians, Security, Clinical Nurse Specialist(s), Nursing Professional Development Practitioner(s), Nurse Leaders, Social Work, Psychiatry, Integrative Behavioral Health, Nursing Informatics, Accreditation, Advanced Practice Practitioners, Patient Experience, Operations Leaders, Clinical Nurse(s), and the Medical Emergency Response Nurse(s).

The primary deliverables were evidence-based and validated assessment tools and web-based resources. Nurses now use the C-SSRS screening tool to stratify risk and differentiate between active and passive suicidal ideation. This eliminated the need to utilize the National Suicide Hotline for every patient. Additionally, screening stratified patients into low, medium, or high-risk levels. Each level includes evidence-based interventions that could be individualized to the patient.

A behavioral health resource website containing information on community resources, workflows with a companion badge tag was created. We were also able to add a dedicated behavioral health social worker who performed a full Suicide Assessment Five-Step Evaluation and Triage (SAFE-T) assessment on all patients with SI. This comprehensive approach provided an individualized plan of care including follow-up by interdisciplinary team members. Formative evaluation has been ongoing throughout the rollout process and pre/post surveys regarding staff comfort level and knowledge of suicidal ideation improved by 30%. Additionally, data for patients has shown that only 4 suicidal patients out of 64 patients so far were stratified as high risk for suicide with the C-SSRS, thus eliminating the need to draw upon National Suicide Hotline resources.

How to Heal a Hospital: Transdisciplinary Team Design of Healthcare Environments

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Purpose: Over 80% of U.S. hospitals are commissioning renovations, redesigns, or new build projects in the aftermath of the pandemic, when over $240 million dollars of deferred hospital maintenance caused operational crises affecting patient care delivery. In Montana, 1 in 4 hospitals are at risk of closure, leading a statewide call-to-action to invest in infrastructure that aligns with community growth and healthcare needs. A transdisciplinary team (engineering, nursing) was assembled at Montana State University to develop a protocol to evaluate hospital health to optimize hospital operations, with the goal of keeping them solvent and serving their communities.

Theoretical Underpinning: Rural nursing theory (nursing) and theory of built environment (engineering) are synthesized as the community-based participatory design framework, which encourages residents and hospital leadership to collaborate during environmental/resource appraisal with guidance from clinical voice (clinician/provider). Rural nursing theory focuses on the use of community members as the experts in defining their idea of health and barriers/facilitators to accessing care. Theory of built environment focuses on elements of a physical facility which influence or affect health. Concepts which intersect with each theory include: *networks of communication and collaboration*, perception of designers as *insider/outsider*, availability and utility of *resources*, and *familiarity* as healthcare teams transition between old and new environments.

Method: Engineers and nurses evaluate a healthcare environment together across domains of hospital health: air quality, lighting, wayfinding, information management, infection control, sound, and supply management. These are quantitatively evaluated again facility and oversight organization (e.g., Joint Commission) regulations and guidelines. Nurses also conduct qualitative, semi-structured interviews with community members and compare to observations made from workflow during care delivery to find patterns, which then can inform recommendations to the facility for meaningful design. A current research project using this approach of embedded mixed methodology is currently underway with Phillips County Hospital in Malta, Montana, with a team comprised of engineering and nursing students and faculty as part of a 12-month grant with the Center for American Indian and Rural Health Equity.

Link to Practice and Research: The development of this protocol and its testing at Phillips County Hospitals serves two functions: 1) creation of a best practice model to embed nursing with engineering teams in navigating healthcare system needs for optimal care delivery during facility design/renovation and 2) data collection to research the aspects of the built environment which affect health and the influence of community engagement during design decision-making.

Conclusion: There is a growing body of nurses trained in the design, appraisal, and leadership of healthcare design. As an academic partner with the Nursing Institute of Healthcare Design, Montana State University is adding to the body of knowledge related to the significance of transdisciplinary partnership with engineers to ensure meaningful design. Meaningful design is that which demonstrates cultural, physical, emotional, and spiritual congruence with the population the healthcare system serves. By including the community in the design process using the framework mentioned, healthcare systems have an increased likelihood of responsible stewardship for maintaining appropriate service lines and ultimately healthcare access.

Funding: Center for American Indian and Rural Health Equity (sub-award from NIH)

Impact of a Coaching Program on Student Retention and Course Pass Rates in an Adn Program

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Student success in college is judged by retention and graduation rates (Millea et al., 2018). Nursing student retention and attrition are identified as ongoing areas of international concern. Academic failure is known to impact students, their families, the institutions, and the greater communities in relation to the overall nursing shortage (Brown et al., 2020). Nursing students that do not progress affect the present nursing shortage since the failure leaves an opening that is then not filled (Cross & Rogers, 2022). For those institutions that may have a direct relationship with a health system, students who do not progress have an even bigger impact on the nursing shortage. The purpose of this study is to determine the impact of a coaching program on student retention and pass rates in an associate degree nursing program. These findings may help determine the value of a coaching program in the school of nursing and may inform future programs in other schools at the study college.

Research Questions:

1. Is there a difference in course pass rates among associate degree RN students before and after participating in an academic success coaching program?
2. Is there a difference in course retention rates among associate degree RN students before and after participating in an academic success coaching program?
3. Is there a difference in course pass rates among associate degree RN students before and after participating in an academic success coaching program based on group demographics?

Methods: Data was collected retrospectively. Students who met the inclusionary criteria were selected to enter an Academic Success Coaching Program. Participants were given a learning style test to complete before the initial meeting with the Academic Success coach. Students met weekly or biweekly with a coach and meetings were tailored to student needs. Course pass rates and retention were examined before and after the intervention.

Outcomes: Course pass rates will increase, retention rates will increase, and the Academic Success Coaching Program will be implemented in all programs. Additionally, the number of nursing graduates will increase and improve nurse recruitment in the health system.

Method: This study uses a pre-experimental within-group pre-test-posttest design. Course pass rates and retention rates will be examined before and after the intervention. Participants will be selected from a purposive sample of individuals that are enrolled in an associate degree nursing program and meet certain criteria.

Discussion and Conclusions: Upon completion, the outcome of this study may demonstrate how an effective academic coaching program can improve retention rates in associate degree nursing students.

Implementation of an ED Flow Team to Reduce Patients Leaving without Treatment

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Problem: The project's organization is a world-renowned urban academic medical center with over 750 inpatient beds and an Adult Emergency Department (AED) annual volume of 53,000 patients. However, 22% of these patients who seek emergency care leave without being seen by a provider due to admitted patients occupying ED beds for an average of 19 hours while waiting for an inpatient bed.

Purpose: The purpose of this quality improvement initiative is to determine if the cooperation of an interdisciplinary, collaborative ED flow team would decrease the number of patients seeking emergency care from leaving the ED without being seen by a provider by reducing boarding times in the ED.

Methods: The QI-PL utilizes weekly chart audits on a password protected computer to measure time between bed assignment and patient arriving on the inpatient unit and left without being seen by provider rates. The QI Project Lead (QI-PL) assembled interdisciplinary stakeholders through an introductory educational meeting to form the ED flow team to expedite ED boarding patients' transfer to inpatient units. The flow team consists of four inpatient and ED nursing and provider leadership members, one nursing informaticist, one environmental services supervisor, one transportation services supervisor, three bed coordinators, and one case manager. The flow team meets every week to ensure each team member is addressing specific structure, process, and outcome goals to decrease ED boarding times.

Preliminary Results: This project will take place over a 15 week period from August 2023 to December 2023. The median time between bed assignment and patient arriving on the inpatient unit from the ED has increased from 65 minutes in week one to 70 minutes in week four. The left without being seen by provider rates has decreased from 23.2% in week one to 19.7% in week four.

Preliminary Conclusions: Preliminary findings suggest the ED flow team is making substantial progress in changing the structure and process for admitting patients from the ED. Although there has been an increase in time from bed assignment to patient arriving on the unit, the left without being seen by provider rates have decreased by 4%. Thus, the ED flow team will continue to streamline the admission process for boarding ED patients.

Jail-to-Community: Enhancing Collaboration between Probation and Mental Health

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Purpose: This quality improvement (QI) pilot project aimed to improve knowledge and skills to enhance confidence in interprofessional collaboration among community-based mental health psychiatric mental health nurse practitioners (PMHNPs) and psychiatry providers and county probation officers working with jail-to-community transitioning adults who experience mental illness.

Background: Each year there are over one million individuals incarcerated in city and county jails throughout the United States with hundreds of thousands transitioning back to their communities within the same year. It is estimated around 86% of individuals incarcerated in jails experience mental illness symptoms with around 60% experiencing a substance use disorder. Jails, unlike prisons, lack statutorily mandated transition programs. Inhibitors to jail to community transitions are several and are rooted in systematic inequalities that have created conditions making access to basic needs, fair justice processes and evidenced-based support for transitions to include mental health and substance use treatment limited or entirely absent in many communities. Individuals who experience jail incarceration have higher rates of past adverse childhood experiences, traumas that compound as they become justice involved. Release from jail does not mean being free of obligations. The ongoing cycle of justice involvement often creates an interlocking matrix of power imbalances where individuals are expected to transition while prioritizing work and justice obligations while locating housing, juggling mental health treatment, and coordinating transportation. The transition from jail to community is a complex transitional time involving both a situational and health-illness transition for individuals who experience mental illness. Community supervision, or probation, is frequently ordered. Probation officers complete in-depth needs and risk assessments and work to support individuals through transition. Mental health practitioners also complete assessments, but, the two professional groups seldom collaborate unless mutual clients are court ordered to treatment. There is an opportunity to build interprofessional collaboration between groups to support this complex transitional period.

Methods: This QI project used a quasi-experimental pretest and posttest design with an asynchronous educational video series hosted on Vimeo. Eleven total participants were recruited through convenience sampling and completed pre- and post-test intervention surveys that assessed knowledge, skills and confidence to conduct interprofessional collaboration. Descriptive statistics were utilized in analysis of survey data.

Results: Eleven participants (four mental health practitioners and seven probation professionals) self-identified as eligible and completed pretest and posttest intervention surveys. All participants demonstrated increased knowledge, skills and confidence in the posttest survey. 100% of participants indicated they feel interprofessional collaboration is important between the two groups and would support ongoing opportunities for interprofessional collaboration.

Conclusion: Asynchronous education tailored for mental health practitioners and probation professionals about the significance of interprofessional collaboration between groups to support mutual clients in jail to community transitions is an effective method to increase knowledge, skills and confidence of both professional groups. Jail to community transition is complex and lacks standardized clinical approaches for guiding care. Interprofessional collaboration ensures patient receive person-centered approaches and treatment supportive of their unique needs.

Pomodoro As a Teaching Technique to Improve Student Engagement within the Classroom

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Purpose/Aims: To compare students perceived engagement during in-person 3-hour classes when the Pomodoro technique is used, compared to breaks determined by the professor.

Rationale/Conceptual Basis/Background: Higher education classes are often several hours with mentally demanding lectures, which can be challenging for students to maintain focus and engagement. Typically, in higher education classes, professors determine schedule breaks and students do not always know how long they will be listening to a lecture before a scheduled break. The Pomodoro technique is a time management method that involves breaking focused work sessions into 25 minutes, followed by a five minute break. After four 25 minute sessions, a 15 minute break follows. Potentially, a structured break strategy, such as the Pomodoro method can support student engagement, however, there are no studies that explore the use of the Pomodoro technique in higher education in-person classes.

Methods: During the Fall 2023 semester, two professors are teaching their classes where every other week students will receive a lecture using the Pomodoro break technique or the traditional break technique where professors determine the breaks. The two classes consist of an undergraduate nursing class and a graduate social work class. At the end of each class, students have the option to complete a survey on their perceived engagement. A modified version for the Generic Student Engagement Scale was used to assess student engagement. Data are analyzed to describe the average score for each survey item on the Pomodoro technique teaching days and the standard teaching technique days and are compared using t-tests across the two break techniques.

Assessment of Findings/Outcomes Achieved: Data collection will be completed by the end of the Fall 2023 semester. Since the start of the project, there have been 138 survey responses received, of which 79 (53%) occurred on Pomodoro teaching days. Preliminary findings include, students are statistically significantly more likely to report that they looked forward to the course activities and felt curious about the course content on Pomodoro teaching days, compared to traditional teaching days. Measures that assess in-class engagement did not reach statistical significance when comparing the Pomodoro teaching days to the traditional teaching days. Qualitative responses suggest that students prefer the Pomodoro teaching days, "It made it easier to listen...When I started dropping off attention wise, we had a break to rejuvenate. Also really helped with general body pain/discomfort."

Conclusions/Implications: Scheduled breaks during higher education classes are needed to reduce students' mental fatigue. Evaluations for new teaching models of incorporating scheduled breaks into lectures are needed to understand how taking scheduled breaks influences student engagement during higher education classes.

INTERPROFESSIONAL EDUCATION / COLLABORATION

Role-Play to Teach Leadership Excellence in Advanced Practice (LEAP) Nursing Students

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Purpose: This project's purpose is to implement and evaluate a clinical leadership skills educational activity for advanced practice nursing (APRN) students to enable advocacy for holistic person-centered care as a novice clinician.

Background: Responding to a more informed public's demand for holistic healthcare, APRNs are uniquely poised to be critical thought leaders in healthcare. Currently most academic leadership courses focus on leadership theories, which though critical to increasing leadership understanding, do not provide an opportunity to practice cultivating leadership skills. Further complicating leadership development is the trend towards remote learning. Leadership preparedness skills are crucial to APRNs needing to champion holistic healthcare as novice health care providers in systems traditionally functioning in a medical diagnostic-focused model.

Approach: The development of this educational activity was guided by the Information Motivation Behavioral Skills Theory (IMB). IMB theory purports Information and motivation alone are not adequate to evoke a desired behavioral outcome, emphasizing that practicing a behavioral skill is critical to facilitating behavior change.

Methods: To address this gap, I developed an interactive flipped-classroom synchronous interprofessional patient-care video conference (IPVC) for Doctor of Nursing Practice Family Nurse Practitioner students. Students prepare for their roles with occupational focused readings including clinical practice guidelines, billing guidelines, pertinent pharmaceuticals, and gut microbiome. Students are assigned roles deliberately created to evoke conflict. Roles include retiring pediatrician no longer current in AAP guidelines, overprotective vegan parents focused on gut flora and a practice office manager focused on billing not meeting the clinic's budget demands. No single student is assigned the role of NP leader, instead this rotating role of conflict resolver is intermittently assigned to each student by the faculty moderator using screen icons during the IPVC. The NP student designated needs to assume leadership and resolve the conflict, summarizing positions and offer solutions to move the conversation forward.

The patient care conference simulates real-world challenges providing a creative way for students to practice leadership skills as they apply didactic content and gain experience with interprofessional collaboration.

Outcomes: Data gathered annually for 4 years from a voluntary anonymous Likert scale with short answers survey evaluating the learning activity supports its effectiveness. Though no course credit is awarded for participating in this evaluative survey, consistently>75% of students choose to respond to this survey. The results reported are overwhelmingly positive. On 4-point scale students rated the assignment as 3.9 or higher in all categories and included comments such as:*"Real- life application. I learned how important inter-professional communication is and that there are many other people that are experts in their field*."

Conclusions: The next step is to develop content across APRN specialties and gather more specific user feedback, including examining changes in leadership confidence scores. This Leadership Excellence for Advanced Practice Nurses (LEAP) project was recently awarded grant funding to achieve this next goal.

The Narrative Intervention for Long COVID-19 (NICO): Three Narrative Case Examples

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Purpose/Aims: This study describes the key components of the Narrative Intervention for Long COVID (NICO). We highlight suggestions and examples from three case studies from our stage 1 NICO proof of concept pilot study. These examples demonstrate the application of the NICO intervention and how it informed the next iteration, the Narrative Intervention for Chronic Illness (NICI)™.

Rationale/Background: The NICO study was designed to help people adjust to living with Long COVID-19 through asynchronous email interactions with two social workers over three months. NICO operationalized theoretical components from narrative theory, social work theory, Unitary Caring Science, and solution-focused brief therapy. Narratives offer a unique window into how people learn and understand severe life disruptions like chronic illness. These theories are synthesized through a strengths-based, healthcare social work disciplinary lens. It is important to note that each concept is not distinct but informs and builds on one another. They overlap and interplay with each other in the design and application of NICO.

Methods: A subset of participants who completed the intervention phases of the NICO study (n=12) were selected. Qualitative data from three case exemplars (n=3) were chosen from the NICO participant emails as illustrations of specific applications of the intervention. They do not capture the intervention experience for all participants. This study used conventional content analysis to explore participant illness narratives across the intervention's core components and look for how the intervention impacted the person in context over time.

Results: Three narratives were co-created through narrative inquiry and labeled from participant quotes: Case Exemplar 1," Don't want to feel like a burden"; 2, "I'm still angry about it."; and 3, "You can't scare me with paradise!" These narrative cases operationalize adjustment to illness through narrative-based social work components, including using a strengths-based approach and illness-informed social work skills, brief solution-focused therapy, and components of Unitary Caring Science.

Conclusion/Discussion: Each participant presents unique circumstances and interactions to therapeutic intervention questions, as evidenced by participant responses. However, the core components of this narrative intervention were evident across the three participants, demonstrating how the NICO intervention can be applied asynchronously and augments options that may assist with access to psychotherapeutic care.

Implications for Nursing Practice/Research: As more and more people adjust to living with chronic illness, we need to understand how best to create space for intentionality and normalization. Understanding how adjusting to illness can vary from illness to illness or from acute or chronic illness is essential to developing interventions to help meet the needs of patient adjustment. Nursing research and practice can assist the expansion of traditional in-person talk therapy and offer narrative-informed therapy to help millions of people struggling with chronic illness across the US and the world.

Funding: This study was supported by the University of Colorado, College of Nursing.

Using a Decision-Making Model to Detect Interprofessional Team Bias

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Purpose: The purpose of this study was to examine how bias was introduced during interprofessional team decision-making using Breathett's Model of Heart Failure Decision-Making.

Background: Nurses are members of interprofessional teams that make critical decisions about which therapies will be offered to patients with advanced heart failure. Prior evidence suggests that bias exhibited by individual healthcare professionals is negatively associated with the allocation of appropriate advanced heart failure therapies among women and African American patients. However, how the process of team decision making impacts heart failure therapy allocation is less understood. Many of the contraindications for heart failure therapy allocation are linked to structural barriers and social determinants of health such as employment status, mental health, family caregiving, health care access, social safety, and community resources. As core members of the heart failure team, recognizing and mitigating the impact of bias during team decision-making is of critical importance for nurses. These decisions have significant long-term consequences for patients and families.

Methods: This was a secondary qualitative descriptive analysis of data from a study focused on bias and team dynamics during advanced heart failure therapy allocation. Team meetings were recorded and transcribed from four advanced heart failure treatment centers. The first three transcripts from each center (n=12) were selected for analysis and Breathett's Model was applied deductively and independently to the transcripts by two coders. Trustworthiness was maintained using researcher and data triangulation, reflexivity during regular coding debriefings, and maintenance of a codebook and audit trail.

Assessment of Findings: The central phenomenon of Breathett's Model, "Is the heart sick enough, body well enough, and is there enough social/emotional support to make it through the process?" was well represented in the data. Other aspects of the Model such as overall health status, patient/family behaviors, financial resources, mental health/addiction, age, and comorbid conditions were considered challenges for therapy allocation among the interprofessional team. Social factors were evaluated by teams more subjectively than health status data, presenting an opportunity for bias to influence decision making. Establishing trust with the patient and family was discussed as a major concern and was often related to social resources and adherence patterns. Clinicians described the heart as a finite resource, which also influenced decision-making. Team dynamics, such as being an aggressive versus conservative program, organizational politics, and history of past decision-making within the center also influenced treatment decisions. Patients were more often offered advanced therapies if a member of the team advocated for them.

Conclusions: Health and social factors were key drivers of heart failure allocation among interprofessional teams. Bias in allocation may be addressed through stronger advocacy. Nurses are well prepared to serve as advocates due to the significant amount of time spent delivering clinical care and supporting patients and their families. Nurses can promote equity in therapy allocation by providing patient-centered narratives during heart failure team decision-making that recognize the structural and social complexities impacting treatment.

Funding: This study was funded by the National Heart, Lung and Blood Institute (NHLBI; 5K01HL142848-04)

Adjusting Workload and Schedule Demands to Promote Nurse Leader Well-Being

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Aims: This project aims to alleviate the pressing issue of burnout among nurse leaders by introducing a flexible work guidelines program. The demanding role of nursing leadership, compounded by pandemic-induced stressors, has substantially affected their well-being. To tackle this challenge, our healthcare institution initiated a comprehensive process improvement project to identify and mitigate burnout sources among nurse leaders.

Background: Burnout is a formidable obstacle to the well-being of nursing leaders. The pandemic has exacerbated this issue, leading to heightened burnout rates among nursing professionals. Our institution, reflecting industry trends, witnessed an alarming surge in nurse burnout during the pandemic. In response, we launched an initiative to address burnout sources within our nursing department, including a focus on nurse leaders.

Methods: Our application of Plan-Do-Study-Act (PDSA) cycles started with collaborative focus group sessions with nursing leaders (N=63) to identify burnout factors related to workload and work schedules. These findings led to the development of a flexible work guidelines program, offering options such as remote work, flextime, shortened workweeks, and reduced on-call and meeting demands. Before implementation, we assessed baseline nurse leader burnout using the Mini Z survey, a reliable and valid instrument. After entering into the implementation stage of this project, we plan to assess ongoing nurse leader well-being at six and twelve months post-implementation, combining quantitative data from additional Mini Z surveys with qualitative insights about their experiences with the flexible work guidelines program.

Outcomes Achieved: Among 109 nurse leaders who completed the pre-implementation Mini Z, the results demonstrated strong internal consistency (Cronbach's Alpha: Total = 0.855 [10 items], support = 0.730 [5 items], workload/stress = 0.795 [5 items]). The total Mini Z mean score of 30.5 (standard deviation [SD] 5.99) suggested burnout by being less than the cutoff of 40. Similarly, the mean values of 17.1 (SD 3.1) and 13.5 (SD 3.5) for the support and workload/stress subscales were less than the cutoff of 20, indicating high-stress work environments with inadequate support. These pre-project findings emphasized our project's pressing need by clearly suggesting baseline burnout among our participants.

Conclusions: This project demonstrates our dedication to nurse leader well-being by implementing flexible work guidelines for nurse leaders. Our next steps involve ongoing evaluation and refinement of the program's effectiveness. We also plan to disseminate our findings and advocate for integrating well-being initiatives in healthcare policies, practices, and education. Join us in shaping a future where nurse leaders thrive, leading the way in effective healthcare leadership with a focus on well-being.

Workplace Violence Trends in Oncology Nursing and Beyond: Strategies for Safety

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Aim: The aim of this overview was to raise awareness of workplace violence trends applicable to clinical oncology nursing professionals and organizations, focusing on personal safety and offering strategies to promote safer nursing work environments.

Background: The COVID-19 pandemic has exacerbated poor workplace conditions among nursing professionals. One particular concern was that workplace violence incidents against nursing professionals, including those working in oncology settings, steadily rose during the pandemic. It is crucial to provide up-to-date workplace violence-related information applicable to oncology nursing to ensure the safety of their clinical practice.

Methods: This overview identified and synthesized workplace violence trends pertinent to clinical oncology nursing, forming actionable strategies and resources to enhance personal safety in nursing practice by conducting a comprehensive review of literature, publicly-reported incidents, scholarly resources, and real-world case examples.

Outcomes Achieved: The overview findings supported that the pandemic compounded the stressors experienced by oncology patients and staff, contributing to increased workplace violence and harm to nursing professionals. Broad and oncology-specific trends were assessed and organized, including vignette examples of real-life workplace violence incidents in oncology nursing settings and best practices for mitigating the risks and harms of workplace violence. For example, approaches included strategies for recognizing the warning signs of workplace violence, applying safety measures, and encouraging nurses/having a process for nurses to report. At the same time, organizations can provide resources and proactively mitigate the risk of workplace violence.

Conclusions: Best practices for reducing the risk of harm can be applied to promote the safety of oncology nursing professionals, fostering nurse wellness and better clinical care environments. This overview underscored the urgency of addressing workplace violence trends in clinical oncology settings and throughout all nursing clinical practice. Nursing professionals can implement evidence-based strategies to enhance personal safety and foster a secure work environment. Furthermore, healthcare institutions should prioritize developing and implementing policies and resources to prevent and mitigate workplace violence.

Examining Nurse-Patient Ratios and Perceptions of Implicit Rationing of Nursing Care

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The purpose of the proposed survey study is to examine perceptions of implicitly rationed nursing care and nurse-patient ratios by acute-care hospital direct-care nurses. The research hypothesis is: Where nurse-patient ratios are lower in the nursing work environment direct-care nurses will report less implicit rationing of nursing care. The conceptual framework is the Implicit Rationing of Nursing Care by Maria Schubert (Schubert et al., 2007). The nurse-patient ratios from the California RN staffing ratio law will be used to determine the lower range for the numbers of patients the nurse is caring for in the study. Nurse-patient ratios that fall at or below the California law will be considered lower range ratios.

The sample for the study will consist of direct-care nurses practicing in an acute-care hospital, on adult medical-surgical units, adult medical-surgical type step-down units, or adult telemetry units. The sampling frame is the electronic list of approximately 500,000 currently licensed RNs obtained from the Boards of Nursing in 11 states: New Mexico, Oregon, Idaho, Michigan, Nebraska, Nevada, New Hampshire, North Carolina, Ohio, Rhode Island, and Utah. Because of compact agreements between Boards of Nursing the nurses will be asked which state they are currently practicing in. The Qualtrics survey platform will be used to send the survey to emails of nurses and store the responses. There will be no identifying information collected that connects the survey to a respondent.

Demographic items and an existing instrument, the Perceived Implicit Rationing of Nursing Care (PIRNCA), an unidimensional scale containing 31 items, will be used in this study. Four free text questions will be asked about perceived causes of implicit rationing of nursing care on the nurse’s unit. Implicit rationing of nursing care is common and has been found to lead to poor patient outcomes. Evidence shows that in situations where there are high numbers of patients requiring nursing care, nurses prioritize care in a way that they do not complete all the necessary nursing care. Relationships found between implicit rationing of nursing care and patient mortality suggest implicit rationing of nursing care might be a useful performance measure for hospitals. Relationships between implicit rationing of nursing care and nurse-patient ratios has not been examined in the United States using the PIRNCA.

Innovative Intensive Care Unit Solutions: The Admission, Discharge, Transfer Nurse

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Purpose/Aims: This quality improvement project evaluated the effectiveness of utilizing an admission, discharge, and transfer (ADT) nurse to optimize patient flow and streamline the capture of required patient documentation during patient care transitions out of the Intensive Care Unit (ICU).

Rationale/Background: Timely completion of documentation during unit-to-unit patient care transitions is a standard in healthcare to promote patient safety and positive outcomes and is a high-priority patient safety issue by The Joint Commission. The admission, discharge, and transfer processes are three components of patient flow that are labor and time-intensive and can result in missed documentation, medication errors, and increased length of stay. Using an ADT nurse is one recommended way to improve the patient flow process and address documentation inconsistencies.

Strategy/Implementation/Methods: This quality improvement project was implemented over 12 weeks in a 28-bed ICU in a Level I trauma center and Magnet-designated organization in the rural Northwest. A bundle of three interventions was implemented as follows: 1) A policy outlining the duties and tasks of the ADT was created in collaboration with the ICU nurses, 2) Education on the duties of the ADT role was provided via the online learning management system to the nurses staffing the position, and 3) An ADT nurse was assigned to the day and night shifts over eight weeks. The assigned ADT nurse was responsible for capturing all patient admission histories, medication histories, and documentation of belongings on admission or departure from the ICU.

Assessment of Findings/Outcomes Achieved: A retrospective chart review identified the capture of ADT documentation each week during the intervention. Throughout the eight-week intervention period, the tracked documentation components all demonstrated an increase in average capture with the implemented ADT nurse compared to the average capture pre-intervention. During the intervention period, the capture of admission histories increased by 3.5%, medication histories increased by 15.2%, documentation of belongings on admission increased by 26.5%, and belongings on departure increased by 21.3%. Pre-intervention, the ICU lost an average of five belongings per month; post-intervention, the ICU lost no belongings. Pre-intervention, the unit averaged two incidences of patient harm from missed medication histories; post-intervention data identified no incidences of patient harm because of missed medication histories.

Conclusions/Implications for Practice: This project demonstrates the utility of a permanent ADT nurse to optimize patient flow in an ICU setting. The project's outcomes support the impact of the role on bedside nursing practice, patient safety, and quality of care from admission to departure during the ICU patient's stay. Incorporating ADT nurses on each floor throughout the organization is recommended for future practice. Further study of the role is needed specific to 1) patient bed flow, 2) patient satisfaction, 3) nursing satisfaction, and 4) the impact of revenue savings across sites.

Minority Nurse Leader Career Advancement: A Qualitative Metasynthesis

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Purpose: Despite the evidence supporting the importance of a diverse workforce, the disparity in the representation of ethnic, racial, and gender groups in the healthcare workforce persists. There is an increasing call to action for healthcare leaders to address this disparity; however, only 19% of frontline and mid-level healthcare management positions are held by minorities. The lived experiences and cultural competence of diverse leaders are invaluable in recognizing, understanding, and addressing access inequities and healthcare disparities. This qualitative metasynthesis aims to critically review, appraise, and synthesize existing qualitative studies to answer the research questions: What are the barriers and facilitators to the career advancement of the minority nurse leader? How do personal, interpersonal, and social structures influence minority nurse leader's career advancement?

Approach: Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were used to identify relevant studies. The relevant studies reviewed were phenomenology, ethnography, and descriptive. A systematic examination using Lett's quality appraisal criteria evaluated the results, quality, validity, overall rigor, and applicability of the studies. An inductive qualitative metasynthesis using Noblit and Hare's methodology was conducted to integrate findings from each study, linking data and conclusions to develop new substantial insights and interpretations of the barriers and facilitators to minority nurse leader career advancement.

Outcomes: Three thematic categories emerged as influencing the career advancement of minority nurse leaders: personal, relational/interpersonal, and structural/organizational culture/norms. These factors manifested as barriers, facilitators, or consequences.

Personal factors included attitudes, attributes, skills, and feelings. Personal barriers include a lack of confidence, fear, and perception of a "no-win situation." Consequences of these personal barriers include disappointment, exhaustion, isolation, sadness, pressure to conform, and resignation. Self-awareness, self-confidence, determination, perseverance, and self-assurance positively influenced nurse leader motivation and ownership, facilitating self-improvement.

The relational experiences described pertain to the interactions, transactions, and experiences the nurse leader has with others. The negative interpersonal factors hindering advancement include attitudes, racism, bias, hostility, and negativity others demonstrate toward the participant. Positive interpersonal relations include collaboration, encouragement, family, friends, faith, interest, networking opportunities, recognition, shadowing, and support.

Structural barriers refer to practices, processes, and cultural norms favoring advantaged groups and affecting a group disproportionately, perpetuating or maintaining disparities. Structural barriers encountered by minority leaders included a lack of diversity, and exclusivity, limiting opportunities for high performers overlooked for promotions. Structural facilitators identified include organizational efforts to eliminate bias, inclusivity, and mentorship.

Conclusion: Barriers and facilitators to minority nurse leader career advancement exist at the personal, interpersonal, and structural levels. Opportunities exist to position minority nurse leaders for success by leveraging and optimizing the facilitators. Formal programs, including structured mentorship, are needed to support the career advancement of minority nurse leaders. Training and education are needed to equip nurse leaders with the knowledge, tools, and mentorship to address and mitigate care delivery inequalities. Additional research is needed to examine intersectionality of sex, gender, race or other social constructs with career advancement.

Designing a Mentorship Program for the Advancement of BIPOC Washington Nurses

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Background: The Advancing BIPOC Learning and Engagement (ABLE) Network, supported by the Health Resources and Services Administration (HRSA), was tasked with developing a comprehensive pipeline for Black, Indigenous and People of Color (BIPOC) nurses to advance their education and careers. To understand the strengths, assets and capacities of the BIPOC nurse community in the state, the ABLE Network conducted a needs assessment in 2022; two conclusions from the needs assessment were (1) Multicultural Nursing Organizations (MCNOs) are supportive organizations that can provide resources and community for BIPOC nurses, and (2) mentorship is both foundational to career and educational advancement and difficult to access, leading to inconsistent opportunities for students and novice professionals to advance their career. While the needs assessment included a wide range of organizations and perspectives, nursing students were noticeably absent as participants. The needs assessment conclusions and gaps informed this work.

Purpose: To identify the mentorship needs and preferences of nursing students and design a pilot mentorship program to support the needs of BIPOC individuals in nursing.

Methods: We conducted semi-structured interviews with BIPOC nursing students who had received a scholarship from the ABLE Network (henceforth called ABLE Scholars) to understand their needs and preferences for mentorship. We utilized rapid qualitative methods to identify interview themes. A matrix was created to analyze the interview content. Findings were organized using a mentoring program framework to inform the design of a logic model.

Findings: 8 interviews were conducted with ABLE Scholars. A quarter of participants were Black, Hispanic, Asian and American Indian/Alaska Native respectively. The majority (75%) were obtaining a Masters degree and 25% were obtaining their Doctorate at the time of interviews. Participants highlighted their lack of or inconsistency in prior mentorship in nursing, desired characteristics in a mentor, preferences for mentorship program structure, content and the matching process, and the how nursing schools and MCNOs could support the mentorship for nurses of color. Some key findings include expansion of the mentoring pool to non-BIPOC nurses and professionals across disciplines and the need for increased outreach and visibility of MCNOs in nursing schools.

Conclusions: Recommendations and a pilot mentorship program logic model were constructed based on the findings of the needs assessment and the student interviews. BIPOC nurse leaders provide unique support to BIPOC nursing students, but relying solely on them for mentorship places an inequitable burden on them. non-BIPOC nurse leaders should consider the role they play in advancing equity in nursing and actively participate in advancing the education and careers of nurses from BIPOC communities. In addition, MCNOs can play a vital role in strengthening the mentorship opportunities available to BIPOC individuals in nursing, and encourage greater diversity and equity in Washington state. The next steps for the ABLE Network include refining the logic model, implementing the mentorship program and evaluating program outcomes for future iterations.

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Enhancing Transitions of Care: The Heal at Home Program

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Learning Objective(s): This abstract seeks to educate healthcare professionals and stakeholders on the benefits of an effective transitions of care program, highlighting how it can enhance patient experiences and positively impact health systems capacity.

Aim: The aim of the Heal at Home program is to optimize the transition of patients from acute care centers to home, ensuring a standardized discharge process and connecting patients with appropriate home health care resources for their recovery journey.

Background: The healthcare journey for hospitalized patients includes transitions from clinic or emergency care visits, hospital admissions, inpatient services, discharge planning, and home recovery. Placing patients in the most suitable care setting for their condition is paramount for enhancing the patient experience and promoting positive health outcomes. Conversely, inappropriate placements can result in medical futility, heightened 30-day readmission rates, suboptimal patient results, and added financial burdens due to increased labor costs and decreased patient throughput.

Certain patient populations can benefit significantly from spending less time in the hospital and more time recuperating in their homes, with home health agencies playing a pivotal role in this process. However, the consistency of discharge instructions provided by healthcare providers to home health agencies is often lacking, resulting in suboptimal transition and recovery experiences.

Methods: To promote appropriate patient placement and transitions of care, we developed and implemented the Heal at Home program within a Mountain West academic medical center with five hospitals. This ongoing and comprehensive program promotes standardized discharge procedures, efficient communication pathways, and a strengthened partnership with a home health agency. Implementation includes identifying hospitalized patients who would benefit from an earlier transition home, providing patient education, utilizing standardized discharge order sets, and enhancing coordination between hospital care teams and the home health partner. Project process measures include monitoring hospital 30-day readmission rates, patient length of stay, and patient engagement metrics.

Outcomes Achieved: Implementation and evaluations are ongoing, we have seen noteworthy improvements during the first nine months. For the 129 patients qualifying for the project, we reduced their length of stay by an average of 17 [min 14 hours, max 24] hours per patient with a 30-day readmission rate of 3.9% (n = 5) compared to 15.6% for all utilizers of the home health agency. For the 68 participants with available Net Promotor Scores, 94.1% (n = 64) suggested they were likely or very likely to refer someone to the Heal at Home program.

Conclusions/Implications: Efficiencies gained through implementing the Heal at Home program have resulted in a notable reduction in LOS for participants and reduced readmissions compared to their peers. Simultaneously, patient satisfaction levels have either been maintained or improved. Furthermore, the organization has noted a reduced LOS, allowing for better alignment with its mission and sustainability to meet the community’s health.

The ongoing Heal at Home program demonstrates a promising approach to optimizing transitions of care, benefiting both patients and healthcare systems. It promotes standardized procedures, clear communication, and improved patient outcomes during the critical phase of transitioning from hospital to home-based health services.

Hitting the Bullseye: Dismantling Racism in Nursing Education

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Purpose/Aims: This project aims to improve health equity in Utah by dismantling racism in nursing education. The Extension for Community Health Outcomes (ECHO) format was used to bring together four schools or colleges of nursing (urban Hispanic serving institution, rural, academic health sciences, and private/urban nonprofit) in Utah to study the issue, conduct case study reviews, and share best practices on dismantling factors that reinforce racism in nursing education.

Rationale/Background: The Utah Action Coalition has a track record of success in helping Utah's nursing workforce achieve health equity and advance the goals of the National Academy of Medicine's Future of Nursing report. Nurse educators must prepare nursing students to care for all patients and populations, regardless of race, color, national origin, sex, ethnicity, religion, or age. Much work is underway to increase access to nursing education by diverse populations. However, once in the nursing education system, students often experience racist situations in the classroom and clinical setting. Nurse educators must understand their implicit biases, recognize racist barriers, and know how to create inclusive learning environments and student sense of belonging.

Approach/Methods/Findings: In partnership with a national consultant, the Utah Action Coalition (UAC) collaborated with four nursing education programs to develop an interactive, safe, and confidential education series to discuss issues of racism in nursing education and share best practice action steps that nurse educators can take to dismantle racist policies and practices. A Steering Committee assisted with the development of the topics for each session. Using the ECHO format of brief presentation, case study, small group discussion, and report out, faculty from the University of Utah, Utah State University, Weber State University, and Westminster University will participate in six monthly sessions held from October 2023 to April 2024. Each session will be evaluated for participant knowledge, learning outcome, confidence, barriers, and satisfaction. A summative evaluation assessing the feasibility, usability, and satisfaction with the ECHO format, best practices, and learner anti-racism skills will be completed at the end of the six sessions. Findings will be presented as executive summaries for each institution. Lessons learned will be applied to future educational offerings.

Conclusion: Dismantling racism in nursing education is a priority to ensure diverse nursing students have a valuable and self-affirming education experience. Improving the diversity of the nursing workforce will impact social determinants of health, health equity, and patient outcomes. The next steps for the project include repeating the sessions for additional nursing schools in the state, assisting participating schools with implementing Diverse Student Advisory Groups, and determining common structural barriers that can be addressed through policy change.

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Nurse Substance Use for Managing Pain and Its Effect on Patient Care and Work Performance

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Purpose: To examine nurses' use of alcohol and cannabis to cope with pain and its effect on patient care and work performance.

Background: Prior research has shown the prevalence and reasons behind nurses' substance use. However, there is a gap in knowledge on the potential impact of use on patient care and work performance. The performance of nurses has a significant impact on both patient care and healthcare systems. There is a paucity of research examining the utilization of substances among nurses for pain treatment. The predominant reason for the utilization of medicinal cannabis is the management of pain. In a 2019 cross-sectional poll of 3,120 US direct-patient care nurses, 90% (n=2312) reported pain in the previous week, averaging four out of ten. 34% of respondents used alcohol, cannabis, or prescription drugs to manage their pain.

Methods: Here we report on a secondary analysis performed on nurses surveyed (N = 2312) on their pain management. This study was conducted as a secondary analysis of a subset of data collected for a mixed-methods study assessing patterns of cannabis use in nurses in the United States. In the parent study, eligible participants were licensed registered nurses working for 8 or more hours per week and practicing direct patient care in the United States. Data gathered from the parent study included nurse-reported alcohol use for pain management, cannabis use for pain management, effects on work performance, and effects on patient care. A Chi-Square Test of Independence was performed to assess the relationships between alcohol use and effect on work performance, alcohol use and effect on patient care, cannabis use and effect on work performance, and cannabis use and effect on patient care.

Results: Of the nurses who reported using cannabis as a method of pain measurement (N = 88), 61 nurses indicated that their work performance was affected, but this association merely approached significance, X2 (1, n = 61) = 3.80, p =.051. Of those nurses, 35 reported that their cannabis use affected patient care, which was not a significant association, X2(1, n = 35) = 0.89, p =.347. Meanwhile, of the nurses who reported alcohol use as a pain coping mechanism (N = 136), there was a significant association between alcohol and a negative impact on work performance, X2 (1, n = 95) = 6.67, p =.010. But there was no significant association between alcohol use as a coping mechanism and a negative impact on patient care, X2 (1, n = 53) = 0.96, p =.327.

Implications: The results of this study suggest that nurses who use cannabis do not perceive any negative impact on patient care, notwithstanding the negative effects on their work performance. Further research is needed to explore the reasons behind this disconnect between nurses' perceptions of their cannabis and alcohol use and their impact on patient care. Interventions and support systems should be implemented to address the negative impact of substance use on work performance among nurses, as it may have implications for patient safety and healthcare quality.

The Ontology of Nurse Well-Being within U.S. Air Force Primary Care Medical Homes

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Purpose/Aims: Knowing the experiences or processes of Nurse Well-Being within Primary Care Medical Homes (PCMHs) is necessary to move the fields of nursing and well-being forward. Using reflexive interpretive description methodology, this study's purpose was to answer, "**What is the ontology of nurse well-being within U.S. Air Force PCMHs**?" Based on a systems model of nurse well-being, additional aims sought to:

- Explore how or what (a) health care delivery system, (b) practice (work) environment, and (c) individual RN factors influence an RN's perceived ability to experience well-being. And,
- Explore how the PCMH nurse defines nurse well-being, and how this compares with contemporary well-being models.

Conceptual Basis / Background: NASEM's *Systems Model of Clinician Burnout and Professional Well-Being* illustrates a feedback loop system in which the health care delivery influences the work system, patients, clinicians, health care organizations, and society. There exists a nursing microsystem within this Systems Model that provides a framework to study PCMH nurse well-being. Using Donabedian's Structure-Process-Outcome framework, the proposed model contains 1) the three levels of health care delivery in the context of a PCMH as *structure*, 2) Work System Factors represented by the Practice Environment Scale of the Nursing Work Index (PES-NWI) as *process*, and 3) Professional Well-Being represented by WellBQ as *outcome*. The PES-NWI, ambulatory care nursing conceptual framework, and NIOSH WellBQ provide a foundation to evaluate and reconstruct through the patterns of meaning (knowledge) from those who know.

Methods: Within this Interpretive Description study, data collection is from individual interviews and focus groups from participants at three Western U.S. Air Force sites and their respective PCMH clinics. For thematic variation, participants with similar roles and workplaces were sought outside this specific context. Reflexive thematic analysis will guide data analysis and the use of ATLAS.ti 23 to facilitate coding in which the patterns of meaning and development of themes are explored across the three PCMH nurse roles of team nurse, nurse manager, and nurse practitioner.

Findings: Data collection is in progress and results (expected by February 2024) will be presented; some themes are in development. Firstly, junior Active-Duty nurses that have transitioned from inpatient units to PCMHs express difficulty in identifying their position as being one that they consider as *nursing*. Secondly, senior PCMH nurse managers desire to treat their junior nurses better than they were treated. Lastly, a lack of available resources (mostly staffing) impedes the nurse's ability to seek professional development and participate in organizational (at all levels) affairs. In line with reflexive thematic analysis, this assessment of findings may change before the presentation.

Implications: This proposed nursing model can address the Future of Nursing priorities to understand and improve nurse well-being: physically, mentally, socially, and morally. Attempts to understand nurse well-being from various worldviews used qualitative and quantitative methods to answer what reality exists for nurses experiencing well-being; however, the focus has been on well-being in inpatient and critical care settings – this study provides an alternative context. Outcomes will be described with corresponding recommendations for policy, clinical, and educational concentrations.

LEADERSHIP / ADMINISTRATIVE ISSUES

Role of Professional Identity in the Lived Experience of Nurses Leaving Nursing

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Purpose/Aims: The purpose of this study was to explore the role of professional identity in the lived experience of nurses who left nursing and to understand through aesthetic knowing what it means to be a nurse who left nursing.

Rationale/Background: The 2022 Nurse Salary Research Report indicated that since its last report in 2020, the percentage of nurses considering leaving nursing rose from 11% to 29%. Nurses are more likely to leave nursing if they have not developed professional identity. While other healthcare professions such as medicine and physical therapy recognized professional identity as an essential component of retention and implemented it into their curricula, nursing has been slow to acknowledge its significance. The urgent and serious nature has resulted in a call to action by researchers, educators, administrators, hospitals, and healthcare systems to understand the phenomenon of nurses who leave nursing.

Methods: Using an interpretive phenomenological approach, eight nurses who left nursing co-constructed the role professional identity plays in the lived experience of leaving nursing. Inclusion criteria included nurses who left nursing within five years of graduation from an accredited nursing school. Participants were recruited using personal references and social media posts on TikTok, Reddit, and Facebook. One-on-one semi-structured interviews took place virtually over Zoom video conferencing, lasting 45-60 minutes. Participants were additionally asked to create and discuss an aesthetic that represented what it meant to be a nurse who left nursing. Following manual interview transcription, one follow-up interview took place for both transcription verification and clarifying questions. Thematic analysis was performed to identify codes and themes.

Results: Thematic analysis identified four themes, represented by quotes from participants: “I always wanted to help people”, “I don’t get paid enough to do this.”, Oh, this Covid thing.”, and “Barbie dream house nursing.”. While the lived experiences within the theme and sub-themes of “I always wanted to help people” positively contributed to the development of a professional identity, the lived experiences participants shared within the remaining themes negatively contributed to a professional identity. The experiences shared by participants in both educational and professional settings did not contribute to the development of a professional identity; thereby acting as a catalyst in their decision to leave nursing.

Implications for Nursing Practice/Research: The results have implications for nursing education, practice, nursing and research. The development of a professional identity begins before the start of a nursing education and continues throughout the practice and career of nurses. It is imperative for both nursing curriculum and faculty to actively contribute to a student’s professional identity development. Nurses must also continue to develop their professional identity while in practice and understand the complexity and changing nature of an identity that will ultimately contribute to them staying in nursing. Additional research is needed regarding the development of specific components that contribute to a professional identity.

Trauma-Informed Nursing Leadership: Supporting an Engaged and Resilient Workforce

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Description of Concept to be Addressed: This paper delves into the intersection of trauma-informed care and theories of leadership in nursing, proposing a novel leadership approach integrating an understanding of the role of trauma in nurses' experiences with existing theories of leadership. A foundational tenant of trauma-informed care is that we must understand and incorporate the effects of traumatic events on the well-being and behavior of those we serve. The trauma-informed care approach posits that proactive acknowledgement of personal and shared trauma and its effects improves the effectiveness of interventions in multiple disciplines. According to The Substance Abuse and Mental Health Service Administration (SAMHSA) the key principles of *safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice and choice; and cultural, historical and gender issues* are critical to the development of a trauma-informed approach within an organization.

Purpose/Aim: The purpose of this paper is to detail a novel approach to nursing leadership which draws from the field of trauma-informed care. Such an approach accounts for the role of trauma, both personal and professional in nurses' professional performance. Using the framework initially developed by SAMHSA, this paper suggests a starting point for the development of trauma-informed nursing leadership as a timely and much-needed theory of leadership for our discipline.

Linking Concept to Practice: Using vignettes from the author's focus groups regarding nurses' experiences with their leaders during the height of the pandemic, the eight key principles of trauma-informed care are extended to the leadership of nurses to illustrate the importance of these key principles in the leadership of nurses. The paper explores the impacts on nurses whose leaders ignored or embraced these key concepts. Each of the key concepts presents a strategy for leaders to provide their teams with the support they need to pursue their goals while promoting an environment of physical and psychological safety.

Conclusions/Utility of Concept to Practice: In an era where the disruptive effects of the pandemic continue to impact our healthcare system's ability to provide effective and timely care, such leadership is especially important. Decreased nursing school enrollment, movement from the bedside to non-clinical roles, early retirement, burn-out and other forms of attrition have contributed to the shortage of professional nursing staff available to care for our communities. Paired with the increasingly complex and labor-intensive needs of our patients, this shortage points to the importance of developing and maintaining an engaged, productive, compassionate and resilient nursing workforce. The goal of trauma-informed nursing leadership is to empower nursing leaders to create a professional environment which not only enhances patient outcomes, but also promotes the well-being of individual nurses and the nursing workforce.

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Lived Experience of ICU Nurses: Implications for Nurse Well-Being & Healthcare Systems

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Aims: This study explores the lived experiences of ICU nurses who cared for patients during the COVID-19 pandemic and the broader context of their professional lives. It also seeks to understand the implications of these experiences for nursing well-being and healthcare systems. Finally, it identifies key areas for development in the future to promote nurse retention and help better prepare new nurses for the world of critical care.

Background: Nursing retention, shortages, and burnout have long been considered the bane of the profession, especially in specialties such as critical care. ICU nurses have been crucial in caring for COVID-19 patients during the pandemic in the last few years. However, the toll of this experience certainly left some lasting effects on their mental and emotional well-being. Understanding their experiences is vital for addressing burnout issues, increasing resilience and nursing support, addressing future nurse shortages, and improving the overall quality of patient care.

Methods: This study utilized qualitative research methods to categorize the lived experiences of ICU nurses into four main themes and two subthemes. Themes include "That Wears on You," highlighting the emotional toll of patient loss; "Professional Context," covering environmental factors and medical mistrust; "Personal Responses," exploring the emotions and behaviors of nurses during the pandemic, and "Nursing Was..." which delves into how nursing practice and attitudes were compelled to evolve in the face of new challenges.

Assessment of Findings: The findings underscore the significant impact of caring for COVID-19 patients on ICU nurses. They reveal the emotional strain, moral distress, and grief experienced by nurses due to high patient mortality rates and inadequate resources. Additionally, the study highlights the role of medical mistrust and media misinformation in exacerbating nurses' challenges. These themes highlight areas in which nurses individually and as a profession can perform key evidence based interventions to strengthen themselves and their community in preparation for a brighter future.

Implications: The study presents several recommendations for action across various stakeholder groups. Current nursing professionals and leaders are encouraged to prioritize nurse support, address social stigma, and provide training on recognizing and responding to traumatic experiences. Future nursing professionals and nurse educators should prepare individuals for the potential trauma of high-stress environments. Community members are called upon to offer support and reject violence or abuse towards nurses. Mental health professionals treating nurses are advised to familiarize themselves with the unique challenges nurses face. Organizations employing nurses should focus on advanced crisis planning, resource preparation, and appropriate nurse-to-patient ratios. Finally, healthcare policymakers must consider the findings to promote nurse retention, safe patient care, and improved nurse-patient ratios.

Conclusion: This study highlights the critical need to support ICU nurses who have endured the challenges of the COVID-19 pandemic. By addressing their experiences and implementing these recommendations, we can work towards a more resilient nursing workforce and enhanced patient care. Learning from the experiences of these nurses both honors their sacrifice and transforms the future into a better, and brighter world to both deliver and receive nursing care.

Equitable Prenatal Care: A Concept Analysis

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Purpose: The purpose of this analysis was to extend the body of knowledge within the discipline of nursing by defining the concept of *equitable prenatal care*. This analysis aims to support nursing scholars studying the impact of equitable prenatal care on maternal outcomes and inform clinicians providing prenatal care.

Description of Method: Walker and Avant's method of concept analysis guided the approach. The Merriam-Webster dictionary, public health organizations, and professional medical and nursing associations were reviewed to develop an operational definition. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis guided the literature search for antecedents, defining attributes, consequences, and empirical referents. The search was conducted in the PubMed and Cumulative Index to Nursing and Allied Health Literature databases using key words such as "prenatal (care)" and "(health) equity." Inclusion criteria were full-text articles published in English from 2018-2023 discussing the receipt or provision of equitable or inequitable prenatal care. Editorials, reviews, and studies addressing outcomes (i.e., comparing rates of prenatal visit attendance among groups) were excluded.

Definition of Concept: The operational definition for equitable prenatal care emerged as *the just and dignified provision of coordinated care for pregnant people, reflective of and responsive to physical, psychosocial, and health education needs*. Antecedents identified were access, health system capacity, and healthcare provider training. The defining attributes included right care, at the right place, at the right time; concordance of care with patient wishes and goals; care continuity; culturally reflexive care; and respectful communication from healthcare providers. The consequences were improved health outcomes, increased trust, and enhanced patient experience. Several empirical referents measuring the defining attributes were identified, including clinical quality metrics and instruments measuring patient satisfaction, autonomy, continuity, communication, and multi-disciplinary collaboration.

Link to Practice and Research: The findings from this analysis suggest healthcare providers and health systems must reflect on the role they play in the provision of equitable prenatal care. Standardized and equal care alone fails to consider structural contexts. Further, while prevention of adverse outcomes is a key consequence of equitable prenatal care, providers can enhance the patient experience and increase trust in the healthcare system. The findings also highlight a gap in knowledge within the Discipline, as only two articles meeting inclusion criteria were published in nursing journals.

Conclusion: Equitable prenatal care as described in this analysis aligns with concepts in Georges' Emancipatory Theory of Compassion for Nursing, which asserts that the biological and political power imbalances that increase risk of suffering also render compassion difficult or even impossible. The examination of antecedents, defining attributes, and consequences brings to light that although equitable prenatal care can be defined, it remains unattainable within the confines of the current healthcare system. Since prenatal care is provided by advanced practice registered nurses, nurse midwives, and nurses, nursing scholars must address prenatal care providers' ability to activate care that is more equitable despite the structural inequities within the healthcare system. More research is needed to include additional patient populations and solidify the impact of structural inequity on adverse outcomes.

Vaginal Preparation to Reduce Postoperative Cesarean Surgical Site Infections

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Purpose: To reduce postoperative surgical site infections (SSIs) by implementing vaginal preparation among pregnant women undergoing cesarean sections (CSs).

Background: More than 6,000 live births per year are delivered at the labor and delivery unit (LDU) at the project site, of those, 32% are CSs. A surgical site infection after CS is defined as a superficial or deep tissue infection at the surgical site up to 30 days following surgery. The unit experienced a two-fold increase in the SSI rates from 2021 to 2022. An appraisal of evidence supported the use of vaginal preparations to prevent SSI post CS (SSI-CS). The literature also suggests that vaginal preparation is a cost-effective and feasible intervention to reduce SSIs.

Implementation: An evidence-based translation project guided by the IOWA model was used to implement a practice change in the Labor and Delivery Unit (LDU) in a southern California Magnet Hospital. The vaginal preparation involved using two povidone iodine swabs to clean the vagina for 15 seconds (with each swab) within one hour before CS surgery. The vaginal preparation was administered to expectant women in the LDU or the OR (if unscheduled CS deliveries). The project leader collected, appraised, and synthesized the evidence focusing on vaginal preparation. She presented the evidence to the unit leadership and staff and obtained approval for implementation. She delivered several unit-based in-service educational and training sessions on vaginal preparation for the registered nurses, created data collection and tracking plans, and collaborated with the site's clinical data specialist to extract the project-specific data from the facility's EHR and to input data on a protected spreadsheet on the hospital-secured network. An exempt determination from the facility's Clinical Research Office was obtained prior to implementation.

Outcome Measures: The primary outcome measure was the Surgical Site Infection rate following CS deliveries in the LDU. The SSI-CS is tracked quarterly at the facility. Preimplementation SSI-CS rate from February 1 to April 15, 2023, was extracted and compared to the postimplementation SSI-CS rate from April 16 to September 30, 2023.

Findings: The pre-post comparison involved 262 eligible CS in the preimplementation period and 190 cases in the postimplementation period. The SSI-CS rate in the preimplementation period was 1% (3 SSI-CS cases). No SSI-CS cases were reported (0% rate) thus far since the implementation of vaginal preparation started. Tracking of the SSI-CS will continue through December 30, 2023.

Conclusions: Vaginal preparation before CS deliveries decreased SSI rate in the LDU. Vaginal preparation is a cheap and effective tool in clinical prevention of SSI-CS.

Recommendations: The findings, thus far, support adopting vaginal preparation as a component in the standard of care at the facility; therefore, it was integrated into the LDU policy and procedures. The practice will also be rolled into the other LDU facilities in the system where this project was done. Future researcher should explore the role of vaginal preparation in preventing SSI in women undergoing other types of pelvic surgeries.

An Integrative Review on How Social Media Impacts the Health of Postpartum Women

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Purpose/Aim: The aim of this integrative review is to understand the state of the science on the impact of social media use on the physical and mental healthcare decision-making of women during the postpartum period.

Background/Rationale: In the United States (U.S.), about 1,200 women die annually from childbirth-related causes and over 50% of those deaths occur during the postpartum period. With nearly 75% of Americans using some form of social media, these platforms have become sources of health-related postpartum content.

Methods: Between April-May 2023, a multipronged integrative review process was undertaken. First, a Population, Intervention, Control, Outcome, and Time (PICO/T) question was developed to guide the integrative review process. The search strategy was finalized after consulting with a faculty mentor and biomedical librarian. Next, 1,488 articles from four databases (PubMed, CINHAL, PsycInfo, Web of Science) were uploaded to Rayyan, a screening and data extraction tool for conducting systematic reviews. A team of two reviewers (AA, BES) independently screened all the abstracts for inclusion criteria: (a) postpartum women, (b) social media, (c) United States-based, (d) English-language, and (e) published between 2018-2023. After the peer review process, the reviewers resolved conflicts collaboratively, resulting in three eligible articles. A PRISMA diagram was developed illustrating the screening process and criteria used for article selection.

Assessment/Findings: The three articles included in this integrative review reflect on the importance of how social media is an integral part of everyday life for postpartum women. In particular, connecting with other postpartum women and building relationships based on shared experiences provided a sense of community and social support that women desired, but may not have been able to obtain in their other social networks. Conversely, some women experienced bullying and frustration from feeling ostracized by more popular/influential groups within certain social media platforms. In fact, interactions on social media can increase emotional experiences and affect the emotional well-being of postpartum women. Some women experienced heightened emotional distress related to social comparisons, whereas, some emphasized feelings such as gratefulness and immense love for their children.

Conclusion/Implications, and Future Recommendations: There are two notable conclusions and future recommendations stemming from this integrative review. First, women have positive and negative experiences associated with social media use during the postpartum period; however, more research is needed on how that leads to physical and mental health decision-making during this time. Additionally, pregnancy is the stage during the perinatal period which requires the most monitoring, and decision-making during pregnancy can affect postpartum health; therefore, future research should explore how individual characteristics may influence information-seeking on social media during pregnancy and the postpartum period and their impact on mental and physical health behaviors and outcomes. Second, social influences are integral to navigating the perinatal period; therefore, research should also examine how pregnant and postpartum women appraise information consumed through social media platforms. Furthermore, future research should explore experiences of minority women in the perinatal period as there is a paucity of research in this area.

Prevalence of Marijuana and Opioid Use during Pregnancy in the United States

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Background: Marijuana use in pregnant women is increasing, with an estimated 8% of pregnant women using marijuana in the past month and 2.85% used daily or almost daily. Marijuana use during pregnancy has been linked to several perinatal complications including stillbirth, preterm labor, small for gestational age, neonatal intensive care treatment, and low APGAR scores. Intrauterine exposure to marijuana has been associated with higher incidence of autism spectrum disorder, intellectual and learning disorders, and attention deficit disorders. Marijuana legalization is evolving, currently 37 states have legalized recreational or medical use marijuana. At the same time, the U.S. has been experiencing an opioid epidemic, which is mirrored in pregnant women. Opioid use in pregnancy is associated with preterm labor, still birth, maternal mortality, and neonatal opioid withdrawal syndrome. Perinatal women have highlighted the use of marijuana in lieu of opioids and other analgesics during pregnancy and have indicated a decreased need for pharmaceuticals with marijuana use.

Objective: To characterize national trends in perinatal marijuana and opioid co-use

Methods: We analyzed n=30,272 records from the Pregnancy Risk Assessment Monitoring System (PRAMS) database. Ten states with diverse levels of marijuana legality were included in the analysis: Alaska, Kansas, Maine, Michigan, Missouri, Montana, North Dakota, South Dakota, Vermont, and Wisconsin, with births occurring from 2017 to 2019. We examined the prevalence of marijuana use, opioid use (to include prescription opioids, heroin, and medication for opioid use disorder) and co-use during pregnancy across all states and within each state.

Results: The prevalence of self-reported marijuana use during pregnancy was 7.3% across the entire sample, 2017 reported a rate of 6.7%, 2018 at 7.8% and 2019 reported 7.6%. Variations existed between states, Maine reported the highest rates (12.6%), followed by Alaska (10.6%) and Vermont (8.6%), North Dakota (5.3%) and Kansas (5.2%) reported the lowest frequencies. A total of 27,855 (89.6%) respondents had data on opioid use during pregnancy Prevalence of self-reported opioid use was 5.6% across all three years, 2017 reported a rate of 6.2%, 2018 at 5.7%, and 5.1% in 2019. The highest rates of self-reported opioid use were in Kansas (8.2%) and Missouri (7.4%), the lowest reported opioid rates were for Michigan (3.4%) and South Dakota (4.4%). Co-use of self-reported marijuana and opioids was 1.0% across the entire sample, 0.9% in 2017, 1.0% in 2018, and 1.1% in 2019. The highest co-use rates were found in Vermont (1.8%) and Missouri (1.4%), while the lowest co-use rates were reported in Michigan (0.4%) and Kansas (0.8%).

Conclusion: Keeping in mind the limitations of this data, these findings signalize higher rates of marijuana use during pregnancy in states with legalized recreational marijuana use and lowest rates in states without legality. Highest rates of opioid use were reported in states without marijuana policies. As more states continue to legalize recreational marijuana, understanding changes in use during pregnancy will help to inform public policy and clinical guidance.

MATERNAL HEALTH

Congenital Syphilis Prevention: Equitable Screening in Pregnancy, 3rd Trimester

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Background: Syphilis a sexually transmitted illness is on the rise. It crosses the placenta affecting the fetus; the severity of fetal defects ranges from mild to death, called congenital syphilis. Syphilis, and thus congenital syphilis, is preventable with detection and treatment. The Centers for Disease Control and Prevention (CDC) recommends testing patients at “high risk” during the third trimester. Utah currently tests for syphilis at the initial prenatal visit, typically occurring between 7-10 weeks gestation, but laboratory detection of a positive syphilis result can take up to 12 weeks and sexual relationships can change during pregnancy, but any subsequent testing in Utah is left to the provider’s discretion.

Local Problem: Utah ranks #45 in the nation for congenital syphilis cases, yet it is surrounded by some of the top 10 states for congenital syphilis. Based on data analysis, the state isn’t testing enough, and the surrounding states are foreshadowing a warning to enact preventative measures now. The Utah Department of Health (UDoH) agrees as Utah’s case numbers are rising. Utah lacks a significant history of syphilis outbreaks in obstetric patients and hasn’t been routinely screening for risk factors later in the pregnancy, which highlights a care gap in the state. Two clinics, providing obstetric care, one rural and one urban, participating in the project endorsed the lack of an assessment process for identifying syphilis risks in the 3rd trimester.

Methods: The Johns Hopkins’ Evidence-based Practice Model was used to explore the question, synthesize the evidence, and apply the results in the translation phase: A screening tool was presented to two clinics in an educational training prior to MAs and providers implementing the tool. Rapid cycles of assessment and changes are being applied, using verbal feedback from the project sponsor, medical assistants, and providers and also collecting data every 1-2 weeks, totaling 16 weeks.

Interventions: A screening tool was adopted from the CDC 2021 guidelines, as a framework, then built upon focusing on the risk behaviors of patients and their partners using evidence rated at level 3A/B. The tool excludes age, race/ ethnicity, and indications of income level. It was reviewed extensively by the content expert at the state health department, the project chair, and one review from the Arizona Department of Health. The tool is being used as part of an early 3rd-trimester visit when routine blood testing is planned.

Results: A descriptive in-progress analysis of quantitative data from completed screenings, surveys, and group discussions will include: the number of screenings, missed opportunities, tests ordered when indicated, number of tests not ordered with evidence of risk, number of screenings per provider role, and attitudes, perceptions, perceived barriers, and the cost of additional testing.

Conclusion: This project aimed to improve the quality of obstetrics and neonatal care by increasing awareness, and intervention acceptance, then intentionally and equitably asking questions of all patients regarding syphilis risks, in the 3rd trimester of pregnancy. This project hopes to instill enhanced practices for congenital syphilis prevention in Utah in line with the CDC recommendations.

What Happens in Pregnancy Stays in Pregnancy: A Qualitative Analysis of Postpartum Care

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Aims: This study aims to understand the experiences and potential barriers of individuals with a history of high-risk pregnancy in establishing connections with suitable primary care and postpartum follow-up services. Additionally, the study aims to shed light on the challenges of maintaining cohesive and comprehensive care after a high-risk pregnancy.

Background: The reproductive years provide a window into future health risks for pregnant people. Research has demonstrated significant links between pregnancy complications and future chronic illness: for example, the risk of developing Type 2 Diabetes (T2D) is seven to ten times higher after gestational diabetes (GDM) and two to four times higher after a hypertensive disorder of pregnancy (HDP). Despite the significant impact of pregnancy on future health outcomes, the current maternity care system is siloed from other healthcare specialties and limited to pregnancy and the immediate postpartum period. These risks are even higher for black, indigenous and people of color (BIPOC), whose experiences are exacerbated by racial and ethnic inequities in maternal health care. Following childbirth, many individuals lack a bridge to primary care and fail to receive adequate support in improving long-term health outcomes following pregnancy complications.

Methods: Participants (n=20) with a history of high-risk pregnancy were recruited to participate in online focus groups using Zoom. Multiparous individuals aged 18 to 40 were eligible if they had one of the following health issues: 1) gestational diabetes (GDM) or a hypertensive disorder of pregnancy (HDP), 2) prediabetes diagnosis, or 3) BMI≥30. Focus groups were organized by risk group. A secondary analysis of the focus group occurred through qualitative constant comparison data analysis to identify emergent themes related to primary care and postpartum follow-up services.

Outcomes: Participants reported that healthcare providers did not adequately follow or address the health risks that emerged during pregnancy, and that poorly coordinated care resulted in their health issues falling between the cracks of obstetrics and primary care providers. The 6-week postpartum visit was highlighted as an issue in follow-up care: due to the physical, emotional, and mental health struggles of the early postpartum period, participants suggested that instead, a six-month or one-year visit would be the optimal time for follow-up education regarding their health risks that emerged during pregnancy.

Conclusions: Participants lacked knowledge about future health risks related to pregnancy and were eager for information. The partitioning of maternal healthcare has resulted in health inequities and issues in health access that drive adverse maternal and fetal outcomes in the United States. Addressing the lack of connection to primary care services following high-risk pregnancies requires a multi-pronged approach that addresses the fragmentation of reproductive healthcare and the lack of patient education about pregnancy and long-term health outcomes. Healthcare systems must prioritize comprehensive and collaborative postpartum and ongoing care as an essential component of high-risk pregnancy management.

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An Immersion Intervention for Symptoms of PTSD in Student Veterans

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Purpose: We are exploring the psychophysiological effects of immersion to the chest in 92°F water on male and female student Veterans (N=15) age 18-55 years who experience symptoms of Post-Traumatic Stress Disorder (PTSD) and comorbid depression, anxiety and pain.

Background: We propose that our simple, novel immersion intervention works through affecting neuroendocrine responses, in particular decreasing plasma vasopressin which is elevated in PTSD and comorbid depression and is associated with the severity of hyperarousal and intrusive symptoms. We anticipate that the effects of immersion will be reflected in decreased salivary alpha-amylase levels (sAA), i.e., dampened sympathetic nervous system (SNS) activity. A potential point of convergence may lay in the neuroendocrine response to the central plasma volume shift associated with immersion.

While not all student Veterans have experienced combat, these Veterans are at a particularly high risk for developing PTSD and the incidence is increased with combat frequency and intensity. Prevalence ranges between 1.09-34.84% and increases with the number and length of deployments. When co-morbid depression develops in PTSD individuals, they often delay treatment fearing the stigma attached to mental health treatment. Comorbid chronic pain is experienced by 66% of PTSD patients. Overall pain and pain disability are positively associated with the severity of re-experiencing, with 90% of these Veterans reporting subjective depression, pessimism and a lack of energy and motivation to cope with problems.

Methods:

Research Design: A mixed method design: triangulation of quantitative measures for intensity of symptoms, and repeated psychophysiological measures along with post immersion qualitative descriptive interviews.

Instruments: PTSD Symptoms (PCL-5); Depression (PHQ-9); Combat Exposure (CES); Visual Analogue Scales for Anxiety and Pain (VASA, VASP); Mood (MDMQ); and Salivary alpha-amylase (sAA). Interview questions related to the intervention and participant cues will direct the recorded conversation.

Procedure: Day 1: PCL-5, PHQ-9 and CES are administered; Day 2: VASA,VASP, MDMQ are administered and sAA is collected at baseline dry, 15 min and 45 min of immersion followed by descriptive interviews.

Analysis:

Descriptive statistics, paired t-test, Pearson's correlation (r), multivariate regression or multiple regression tests along with mixed regression and path analysis will be conducted using SPSS v29.

Using qualitative descriptive strategies of thematic analysis to identify, analyze, and report patterns (themes) together with theme confirmation by the PI and Co-Is after member checking with 2-3 randomly selected participants to establish credibility.

Concurrent Triangulation: Both qualitative and quantitative data will be collected concurrently, then findings will be compared for convergence, differences or some combination.

Findings: Recruitment and data collection are ongoing. Participants are recruited through the UNLV Military and Veteran Services Center via an email blast with study flyer. We currently have 7 complete sets of data.

Implications: This novel intervention may provide a fast-acting, nonstigmatizing adjunct therapy for PTSD and comorbid symptoms. Anticipated dampened SNS activity as well as improvements in mood and decreases in anxiety and pain may be related to the therapeutic effects of immersion, water buoyancy and the warm temperature of the therapy pool.

Funding: Sigma/Western Institute of Nursing Research Grant

Comparing Nonpharmacological and Pharmacological Interventions in Anxiety

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Purpose: The purpose of this study is to assess treatment options in the form of pharmacological versus nonpharmacological therapies for persons with anxiety.

Background: Anxiety is a common emotional response to a negative complication or stressors that negatively impact the individuals' social relationships, work-life experience, academic performance, and physiological state. Various pharmacological and nonpharmacological interventions are used to alleviate anxiety symptoms, but no specific modality has been identified. About one-third of the population is affected or will be affected by this emotional response. This study aims to explore individuals' experiences with anxiety and compare the success of nonpharmacological interventions versus pharmacological therapies in the treatment of anxiety.

Methodology: A quantitative study was conducted anonymously via an online email link involving adult participants aged 18 years or older who accessed the short survey via Qualtrics®. Participants completed the survey at any time and at any place at their convenience through a QR code and/or link. The study utilized recruitment on social media platforms such as Facebook and Instagram. Additional study recruitment took place in the hospital setting, social settings, and events. A total of 30 participants with various backgrounds partook in the survey. Researchers have developed a questionnaire for this pilot study available for four weeks and is completely anonymous.

Results: Of the 30 participants, 20% are Kern County Residents and 80% are not. Of the 30 participants, 76.67% are between the age of 18-35, 13.33% are between the ages of 36-45, and 10% are between the ages of 46-64(t=30). Of the 30 participants, 60% (18) are female and 40% (12) are male. In this study, 60% (18) of participants are employed full-time, 13.33% (4) are part-time, and 13.33 (4) are unemployed. Most participants have a college education. Of the 30 participants, 86.67% (26) have experienced anxiety and 13.33% (4) have not. However, 16.67% (5) have been diagnosed with anxiety and 83.33% (25) participants have not been diagnosed with anxiety. Interestingly, 40% (12) of participants experience anxiety symptoms 3 to 5 days per week and 10% (3) use medication to relieve symptoms. Alternative anxiety relievers identified include exercise (21.92%), music (32.88%), counseling (2.74%), games (12.33%), deep breathing exercises (16.44%), meditation (8.22%), group therapy (1.37%), and other (4.11%). 13.79% of participants believe medications are the best treatment option for anxiety, and 86.21% believe no medication is needed.

Nursing Implications: The mixed data brings light to the effectiveness of non-pharmacological treatments. The findings of this study could inform medical care providers of the most effective treatment options for individuals with anxiety. By comparing the success rates of pharmacological and nonpharmacological interventions, medical care providers can provide more individualized and evidenced-based treatment plans to their patients such as exercising, etc. Additionally, this study could shed light on the experiences of lay individuals with anxiety, which could help medical care providers understand the unique challenges and coping mechanisms of this population. This study utilized a descriptive, exploratory, and quantitative design to determine the best individual coping mechanisms used by participants to decrease anxiety symptoms.

Journal Writing in Parents of a Child in the PICU: A Feasibility Study

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Purposes/Aims: The purpose of this study is to describe the feasibility, acceptability, and efficacy of journal writing in parents of a critically ill child. The specific aims include: 1. Describe the feasibility and acceptability of journal writing in parents of a child admitted to the PICU, 2. Describe the stress, anxiety, depression, and PTSD in parents of a critically ill child, 3. Describe the mental health benefits of journal writing during and after their child's hospital stay.

Rationale/Background: It is well documented that a child's critical illness is a stressful event for the entire family, causing significant emotional distress among parents and changes to family functioning. The PICU experience can lead to the development of signs and symptoms of clinical distress and anxiety in parents following patient discharge with documented post-traumatic stress disorder (PTSD) rates around 10-42%, rates of anxiety around 23-31%, and rates of depression around 6-17%. Journal writing has been used largely in the adult intensive care unit (ICU), and it has been shown to reduce anxiety and depression in patients and PTSD in families or relatives after the experiences related to critical illness and intensive care. Available data shows that patients experience decreases in stress and anxiety related to their clinical experience when they take part in a journal writing program, but the effect on parents and family members is inconclusive. Recently, a study of parents of critically ill children showed no statistically significant difference between parents who wrote in a journal versus those in the control group, however, parents reported the journal writing helpful and would recommend it.

Methods: This is a prospective, time-series pilot study utilizing qualitative and quantitative methods. Using convenience sampling methods, data will be collected on 45 consenting parents or caregivers of a child admitted to the PICU of a children's hospital in the Northwestern United States with an expected length of stay greater than 3 days. Total duration of participation will be approximately 3 months after discharge from the hospital. Participants will complete a brief feasibility, acceptability, and short stress questionnaire weekly while in the hospital. Participants will also complete stress, depression, and distress at baseline, discharge, and approximately 3 months after discharge.

Findings/Outcomes Achieved: Data collection will be starting in November 2023.

Conclusions/Implications: This study will increase our understanding of the feasibility and acceptability of journal writing in the PICU setting and provide evidence on effective strategies to decrease stress, depression, and distress in parents. Results may also improve understanding of the causes of stress, anxiety, depression, and PTSD in parents of a critically ill child and the mental health benefits of journal writing. Recommended future undertakings could include analysis of the benefits of journal writing compared to a control group and analysis to determine if there is correlation between days per week of journal usage and decreased stress, anxiety, depression, and PTSD. If there are positive effects, journal writing in the ICU is a simple and cost-effective measure to improve parental mental health.

MENTAL HEALTH

Understanding New Graduate Nurses’ Perspectives on Transitioning into the Workforce

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Purpose: The overall goal of this qualitative study was to uncover perspectives from new graduate nurses (NGNs) on their transition to practice as well as identify individual (e.g., role, personal characteristics, and skills/abilities) and external factors (e.g., organizational and environmental) known to support clinician well-being and innovative workforce systems, such as those promoting connectedness and positive learning environments for students/trainees, thus, quality of patient care.

Background: The COVID-19 pandemic profoundly impacted nurses and has led to a potential crisis in staffing. The U.S. Bureau of Labor Statistics predicted a mass exodus of hospital-based nurses by the end of 2022, resulting in a shortage of more than 1 million nurses. Poorer well-being and mental health underpinned by personal and organizational issues exacerbate nurses exiting the profession. National surveys documented COVID-19’s impact on nurses’ well-being and noted high rates of anxiety, burnout, depression and stress; particularly among NGNs. Additionally, national reports suggest NGNs may have a greater risk of stress, anxiety, burnout, and exiting the profession than more experienced nurses. Therefore, there is a gap in science examining nurse well-being among NGNs and research informing interventions, especially culturally tailored, is limited. Few workplace interventions for improving nurse well-being exist and these interventions were developed pre-pandemic, are burnout-focused, lack effectiveness with long-term follow-ups, and are not culturally informed to the socialization processes related to experiences of stress among NGNs (transition to practice).

Methods: A qualitative study of adult NGN was completed in September 2023. Data was gathered over a period of 3 consecutive days using an online blog format (with participants engaging with the study principal investigator and each other asynchronously in a secure online platform). Participants also completed a short online demographic questionnaire. NGNs were recruited via email and texts by study’s 2 NGN recruitment champions. Participants were eligible if they were employed at a hospital as a staff nurse and graduated with a Bachelor of Science in Nursing in 2021 or 2022. Participants were remunerated with a $50 gift card.

Findings: A total of 25 NGNs completed the demographic survey and the 3-day blog. The majority were female (84%), Asian (52%), and graduated in 2022 (76%). Overall, the qualitative data revealed sentiments of burnout in general. These discussions focused on both things that created stress/burnout or things that facilitated well-being/diminished burnout. The facilitators and barriers to successful transition to practice were either related to the structure/workplace environment or related to their personal attributes or strategies they used to facilitate their own transition.

Conclusion: The study uncovered the facilitators and barriers to successful transitions to practice among hospital-based NGNs. Challenges to transition to practice and strategies to increase NGN success were discussed and recommendations for institutions and schools of nursing were identified. Outcomes will be foundational for building future undergraduate educational programing and interventions to support NGN successful and sustained transition to the workplace.

Funding: Sigma Theta Tau International Honor Society of Nursing, Gamma Psi at-Large Chapter

Mental Illness in the Emergency Department

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Background: Mental illness continues to overcrowd and place a burden on our Emergency Departments (EDs). ED personnel should have the skills and knowledge necessary to evaluate not only the physical symptoms but also the psychological symptoms of an emergency.

Purpose: The purpose of this study was to determine if implementation of the Australian Mental Health Triage Scale (AMHTS) used during triage would have an impact on the length of stay of mental health patients in the ED as well as staff's knowledge, confidence, attitudes of treating mental health patients.

Method: This study was done using a pre-experimental design. Registered Nurses and Providers who worked full time in the ED of a rural hospital in MS were eligible for participation. Education was given to these participants on utilizing the AMHTS for patients entering the ED with mental illness complaints. Analysis was done using a pre-test and post-test provided to the participants using their own subjective data of competencies regarding mentally ill patient triage. A retrospective analysis of electronic health record data was also done eight weeks prior and eight weeks following the education the effects on length of stay. Twelve participants participated in this study.

Results: Length of Stay for mentally ill patients in the ED decreased by 15% post education given of utilizing the AMHTS. A paired sample T-test showed a 21% increase in knowledge, a 35% increase in confidence and a 15% increase in positive attitudes of staff that was given education on the AMHTS by comparison of a pre and post self-evaluation questionnaire.

Conclusion: Using the AMHTS in the ED has shown to decrease length of stay and increase knowledge, confidence, and positive attitudes which helps staff quickly assess patients who come to the ED due to mental health issues, determine priorities, implement quick and effective interventions, and meet the patient's needs more accurately. ED personnel should have the skills and knowledge necessary to evaluate not only the physical symptoms but also the psychological symptoms of an emergency.

Quality Improvement: Motivational Interviewing for Behavioral Health Care Workers

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Purpose: The purpose of this quality improvement project was to provide a multi-session training that teaches the core principles of motivational interviewing to behavioral health care workers who lack proficiency in these skills. The training also helps them understand how motivational interviewing techniques will enhance their current practice with patients struggling with substance use disorders.

Background: Motivational interviewing is a therapeutic communication approach that explores a person’s ambivalence and aims to encourage a positive behavior change. It was first developed for patients struggling with substance use disorders and due to its proven efficacy is now used in a wide variety of specialties in health care. Motivational interviewing techniques may only be obtained through third-party certification or higher education, which leads to an educational gap for behavioral health care workers in the inpatient setting.

Methods: Through the plan-do-study-act model, this quality improvement project was created to address the educational gap in motivational interviewing at a 16-bed inpatient detoxification center. Institutional review board approval was received. Participants included registered nurses, psychiatric technicians, and social work staff (n=18). Initially, participants were administered an anonymous online survey, which was completed prior to the first training session that measured knowledge and attitudes toward motivational interviewing fundamentals. Participants then attended three, two-hour sessions, which spanned over six weeks. At each session, participants were instructed through an interactive online module offered by the American Society of Addiction Medicine. Following each online module, participants practiced their newly learned skills through a role-play scenario. During role-play scenarios, participants were rated on their adherence to motivational interviewing consistent and inconsistent skills on a 7-point scale through a motivational interviewing rating worksheet produced by the National Institute on Drug Abuse and Substance Abuse and Mental Health Services Administration. Feedback was given to participants following the role-play and they were encouraged to practice their skills prior to the next session. Improvement of skills was measured based on adherence scores. Following the last training session participants were again administered the same online anonymous survey that was completed prior to the first session. Pre- and post-training 5-point Likert scale survey results were compared.

Results: Adherence scores for motivational interviewing consistent and inconsistent behaviors were averaged at the end of the third session. Results displayed an average increase in adherence to consistent behaviors and a decrease in inconsistent behaviors. Pre- and post-survey results demonstrated a greater understanding of the core principles and attitudes surrounding motivational interviewing.

Conclusion: This quality improvement training demonstrated increases in staff knowledge and attitudes. Evidence has shown that within six months there can be sharp decreases in retention and application of motivational interviewing skills. Continued efforts through a motivational interviewing committee to create more educational and practical opportunities for staff to stay engaged and practice their newly acquired skills are recommended.

Adjusting to Long COVID-19 Qualitative Insights from a Narrative-Based Intervention

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Purpose/Aims: The Narrative Intervention for Long COVID-19 (NICO) was designed to offer a narrative-based, brief, solution-focused, and Unitary Caring Science informed intervention and explore adjustment to illness for people living with Long COVID. This paper describes qualitative analysis of intervention narratives and post-intervention interviews.

Rationale/Background: Long COVID-19 is a novel, severe, and life disruptive illness. Without adjustment support, many individuals can experience depression and reduced quality of life. A severe shortage of mental health professionals will continue to increase as the number of individuals with chronic illnesses such as Long COVID-19 rises.

Methods: NICO applied an LCSW informed therapeutic interaction via asynchronous email over three months. This study used conventional content analysis and thematic inquiry to explore participant illness narratives created through the intervention and follow-up semi-structured interviews. Participants were recruited via Facebook and completed informed consent processes via Zoom. A total of 12 (n=12) participants completed the NICO intervention, with 11 completing the semi-structured interview (n=11).

Results: Four main themes were identified across participant narratives: Situational meaning: Unknowns of Long COVID-19, Self-schema changes: Long COVID-19 impacts all areas of life, World schema changes: Loss of interaction with the world, and Self-Schema: Long COVID-19 affects identity. All participants expressed experiencing difficulties in living with Long COVID across multiple areas, including social functioning tasks of daily living, which did not occur linearly but from multiple pathways.

Conclusion/Discussion: This study explored the illness narratives of study participants. Participants described the impact of an illness such as Long COVID on multiple areas of their lives, altering meaning, self-schema, and world schema. It highlights the need and utility of asynchronous interventions such as NICO to meet the current reduced mental health workforce due to reduced providers and increased demand. It also highlights the need to explore the process of adjustment to illness as nonlinear and from a more holistic approach.

Implications for Nursing Practice/Research: Future research should examine ways to deliver therapeutic interventions using innovative technological delivery like email, which could lead to future automation and partnerships with therapists and tech experts. Narrative-based therapies are adaptable to various cultures and groups of people based on the patient's experience and narrative understanding instead of imposing a dominant perspective on their experience. Narrative-based approaches have theoretical frameworks and evidence that support their use for people who have been historically marginalized. Further study is needed to explore the possible implications for access to mental health care and health equity.

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Nursing Faculty Work-Life Balance and Mental Wellbeing amid COVID-19 Pandemic

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Purpose: To investigate work-life balance amid COVID-19 pandemic and its association with mental wellbeing among nursing faculty.

Background: Social distancing requirements during COVID-19 pandemic forced nursing faculty to rapidly adopt virtual teaching modality and find creative ways to ensure quality education. At the same time, nursing faculty continued taking care of patients and faced substantial risk of contracting the disease. Additionally, majority of nursing faculty are women who were giving care to family, especially their children during school closures. Limited studies examining the impacts of the COVID-19 pandemic on nursing faculty. It is important to understand the impacts of COVID-19 pandemic on ability to balance work-life and how it is associated with mental wellbeing among nursing faculty.

Methodology: Main outcome is whether a faculty achieved work-life balance measured by the Canadian Mental Health Association's Work-Life Balance Quiz. Mental wellbeing, i.e., Ability to enjoy life, Resilience, Flexibility, was assessed by the Mental Health Meter quiz. Logistic regression models were employed to examine the relationship between mental wellbeing and work-life balance, controlling for age, race, number of working years, and number of teaching years in nursing field.

Results: Twenty nursing faculty from a nursing department participated in the study and only eight (40%) reported that they achieved work-life balance. Having good/excellent ability to enjoy life was associated with an increase of 0.06 percentage points in the probability of achieving work-life balance during the pandemic, however, the association was not statistically significant (95%CI [-0.73; 0.85]). Similarly, resilience was not associated with work-life balance. However, having a good level of flexibility increased the chance of achieving work-life balance by 0.45 percentage points (95% [0.05; 0.81]).

Nursing Implications: Understanding work-life balance during pandemic time and its associated factors would suggest interventions and policies that could mitigate psychological impacts on nursing faculty, such as stress, burnout, reduced satisfaction, or reduced turnover. Such interventions and policies would support nursing faculty's success and quality of life, and address faculty shortage in nursing programs. Further research should explore and pilot potential interventions that could support work-life balance of nursing faculty as well as evaluate such interventions in terms of psychological impacts on nursing faculty.

Increasing Access to Improve Depression & Anxiety Outcomes for African American Women.

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Background: Depression and anxiety are growing health problems in the United States. In 2020/2021, there was a 36.4% to 41.5% increase in reported symptoms of depression and anxiety. Evidence has shown that African American women experience disproportionate increased risks and disparities in obtaining mental health care.

Purpose of Project: To improve access to African American or culturally competent mental health providers for adult African American women. Improving access to mental health care will lead to earlier diagnosis and treatment of depression and anxiety. Evidence has shown that early diagnosis can lead to decreased symptoms, which ultimately leads to improved patient outcomes.

Framework/EBP Model: The Iowa Model of evidence-based practice to promote quality care was utilized. The 5 A's framework was utilized as the foundation for motivational interview techniques.

Evidence-Based Intervention/Benchmark: The validated Patient Health Questionnaire - 9 and Generalized Anxiety Disorder - 7 questionnaire was utilized to screen church members for depression and anxiety. The attendees were educated via PowerPoint presentation on the current rate of depression and anxiety among African American women, including signs and symptoms. Once education was complete, questionnaires were scored and those with a positive score were gathered individually. After explaining the participation requirements and obtaining consent, a list of African American and culturally competent providers was distributed. Follow-up calls and rescreening will be conducted at 1, 2, and 3-months post intervention. The 3-month follow-up questionnaires will be utilized to determine intervention effectiveness.

Evaluation of Results: Within 30 days of the presentation, 50% of participants have contacted their primary care provider or a provider from the list to schedule an appointment. By the second follow up call, 50% of those individuals will have been evaluated by their provider. By the third follow up call, all 50% of the participants who had scheduled an appointment with a provider will have been evaluated. At the end of this project, 50% of participants will have improved symptoms of depression and anxiety, as evidenced by decreased Patient Health Questionnaire - 9 and Generalized Anxiety Disorder - 7 questionnaire scores. Project is in progress; final results are pending and will be completed by presentation date.

Implications for Clinical Practice: In addition to improving access to African American and culturally competent mental health providers this project addresses the disparities experienced by the African American population, decreases stigma attached to mental health within the community, and provides early access to care and treatment, which in turn provides direct access to mental health providers and improved patient outcomes compared to current methods.

Conclusions: By implementing early screening and education regarding the growing problem of depression and anxiety and by improving the barrier of locating African American or culturally competent mental health providers, we directly addressed the mental health disparities experienced by this population.

Neighborhood Characteristics, Maternal Mental Health, and Parenting in Brazil

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Introduction: The significance of neighborhood characteristics in shaping maternal mental health has been a topic of growing interest. Recent research has highlighted the intricate relationship between the quality of a neighborhood's social and physical attributes and maternal well-being. In the context of Brazil, a country rich in cultural diversity and varying socioeconomic landscapes, investigating community factors and their potential influence on maternal mental health and parenting practices holds immense significance. Other studies have shown that built neighborhoods and their effects on maternal mental health, such as walkability, access to resources, and neighborhood cohesion.

Objective: This study examined associations between neighborhood characteristics, maternal depressive symptoms, and parenting.

Method: A cross-sectional study was conducted with 503 mothers and children aged 0 to 6 years from 12 health districts in the city of Salvador-Bahia, Brazil. Data were collected through interviews with mothers at Primary Care Units. The community factors were evaluated based on maternal self-reported questions, including Safe Spaces (e.g., Are recreational areas in your neighborhood safely located and easily accessible? Do you feel safe walking in your neighborhood? Do you feel safe because your neighbors form a trusted community network?), Issues/Problems (e.g., Does your neighborhood have a lot of noise? Is it common to have floods in your neighborhood? Do you see a lot of garbage in the street/open sewer?), Public Services (e.g., Are there adequate and well-located bus stops in your neighborhood? Do the streets in your neighborhood have adequate lighting? Do you have easy access to services, such as schools, daycare, health centers, and social centers in your neighborhood?), and Child Friendly (e.g., Do you think your neighborhood has play or active spaces for children? Do the sidewalks in your neighborhood have stroller ramps?). For maternal depressive symptoms, we used the Self-Report Questionnaire (SRQ-20), and maternal stimulation practices were reported as the number of developmentally enriching activities that the mother engaged in with the young child, adapted from the United Nations Children's Fund Family Care Indicators. For analysis, we used linear regressions with Stata 15 software. The normality of the maternal mental health and stimulation practices outcome variables was assessed using the Shapiro-Wilk test. All ethical aspects were respected.

Results: A total of 503 mother-child pairs participated in the study. The average age of mothers was 30.8 years, and that of children was 2.7 years. The majority of participants were from a racial and ethnic minority (49.7%), participated in a cash transfer program (65%), and had no health insurance (80.12%). In the multivariate analysis that adjusted for sociodemographic covariates, neighborhood safety was most strongly associated with reduced maternal depressive symptoms ($\beta = -0.177$, $p < .001$). Access to public services was inversely associated with maternal stimulation practices ($\beta = -0.151$, $p < .001$).

Conclusion: These findings contribute to our understanding of the multifaceted dynamics neighborhood characteristics and maternal well-being, shedding light on the various ways in which surroundings can influence maternal mental health and parenting behaviors.

Death with and without Dementia: Impact on Family Antidepressant Prescriptions

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Purpose: To examine antidepressant prescriptions in kin of decedents with and without dementia before and after death.

Rationale: Persons with dementia often have more protracted long-term care and end-of-life (EOL) caregiving needs, compared to those with cancer or other chronic illnesses. These dementia-related caregiving responsibilities are typically managed by families, especially spouses and adult children, and are particularly stressful, with high rates of depression. Depression is also associated with those who experience the most intense grief reactions following the loss of a loved one. Both caregiver strain and grief reactions may be lessened among those who feel they have greater support from other family members. Larger family sizes and multiple available caregivers within a family may be more likely to share the caregiving responsibilities and provide grief support. Little is known, however, about how the emotional stress of caregiving may differ before and after the death of persons with and without dementia. Given that antidepressant prescriptions are a strong indicator of clinically relevant levels of caregiver stress and bereavement outcomes, we explored the rates of antidepressant prescriptions among family members of decedents with and without dementia, during the one year prior and one year following a family member's death.

Methods: This retrospective cohort study used data from the novel Utah Caregiving Population Science (Utah C-PopS) dataset and focused on the widows/widowers (n=47,117) and sons/daughters (n=210,572) of decedents who died in Utah between 1998-2016 with dementia (n=29,401) or without dementia (n=98,017). Descriptive statistics were used to describe the study sample and multivariable logistic regressions were used to predict whether someone had an antidepressant prescription during the one-year prior and one-year post death by dementia status, controlling for decedent age, kin age, co-residence status, presence/type/number of other kin, prior antidepressant use, and other variables.

Outcomes Achieved: Multivariable logistic regression models revealed spouses of dementia decedents had higher odds of an antidepressant prescription compared to spouses of non-dementia decedents during pre-death (EOL caregiving) [OR = 1.22 (1.01, 1.46)], including higher odds of prescriptions in female spouses [OR =1.64 (1.39, 1.96)]. Adult children of dementia decedents had higher odds of an antidepressant prescription compared to adult children of non-dementia decedents during pre-death (EOL caregiving) [OR = 1.36 (95% 1.17, 1.58)], including higher odds of prescriptions in daughters [OR=1.74 (1.51, 2.00)]. Conversely, there was no difference in odds of antidepressant prescription 1 year after death in either spouses or adult children of decedents with and without dementia [OR = 1.12 (0.93, 1.33); OR = 1.12 (0.96, 1.31) respectively].

Conclusions: Differences in antidepressant prescriptions during pre-death periods suggests that caregiving and bereavement may be more intense for spouses and adult children of persons with dementia and for females compared to males. Dementia status did not have a significant effect on the odds of post-death grief antidepressant prescriptions. These results underscore the need for pre-death support for caregivers of persons with dementia, particularly female caregivers.

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Exploring the Stigma Experiences Among Adults Living with Tourette Syndrome in the U.S.

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Purpose: The purpose of the study was to explore how stigma related to Tourette Syndrome (TS) has affected experiences with TS diagnosis disclosure, employment, romantic relationships, and service access among adults with TS in the United States.

Background: Approximately 1.4 million people are living with persistent tic disorders, including TS in the United States. Although there is growing research related to TS, the majority of literature only focuses on children and adolescents in educational settings. However, TS symptoms and associated stigma may prevent adults with TS from progressing toward life goals beyond education, such as developing their careers, pursuing romantic relationships, and building families. Stigma experiences have significant consequences to the well-being of TS adults that deserve more attention. Close to 70% of adults with TS have been treated differently by others because of their symptoms. Yet, our knowledge is limited regarding how adults with TS's stigma experience their TS diagnosis disclosure, employment, romantic relationships, and health service access.

Method: A qualitative study design was used with one-on-one, in-depth, semi-structured interviews with adults with TS. IRB approval was obtained prior to recruitment and data collection. Adults who were diagnosed with TS or active tic symptoms and lived in California were recruited from the Southern California chapter of Tourette Association of America and using social media. A total of 32 adults with TS with the age range of 18 to 68 years (M=34; SD=14) were in the final analysis. Interviews were conducted virtually based on participants' preferences. The average interview range was from 60 to 180 minutes. All interview data were collected from January to March 2023, recorded, and transcribed verbatim. Interpretative description qualitative analysis was performed and ATLAS.ti software was used.

Results: Major themes that emerged from the analysis included TS disclosures in employment and romantic relationships, self-management for tic symptoms, and low care services engagement. The majority of participants did not disclose their TS status in their employment settings to avoid stigma from coworkers. Many expressed struggling to find romantic partners who understood their tic symptoms. However, some participants recognized their tic triggers and effectively self-managed by getting adequate sleep, controlling stress, and using other self-remedies to reduce their symptoms. Lastly, some young adult participants reported that they did not utilize services that schools and workplaces offered as part of the disability act due to paperwork burdens and perceived stigma from teachers, friends, and coworkers.

Conclusions/Implications: Many adults with TS experience stigma in their daily lives. Understanding tic triggers may help improve the quality of life in adults with TS, and to this end, future research should focus on self-management of TS. In addition, public awareness of the stigma around TS and the services that are available for adults with TS should be prioritized.

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Implementing Loneliness Screening at a University Student Health Center

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Purpose/Aim: This Doctor of Nursing (DNP) Quality Improvement (QI) aims to implement the UCLA Three-Item Loneliness Scale at Brigham Young University (BYU) Student Health Center and determine the usability, satisfaction, and feasibility of the scale as reported by healthcare clinicians. Successful implementation of the UCLA Three-Item Loneliness Scale will result in increased identification and treatment of loneliness in the university student population.

Background: Despite the recognition of social connectedness as a social determinant of health by the World Health Organization, few healthcare systems in the United States screen for and treat loneliness and social isolation. In May 2023, U.S. Surgeon General Vivek H. Murthy released a general advisory recommending that healthcare organizations train clinicians on risk factors, comorbidities, screening tools, and treatment interventions to address social disconnectedness. Global urgency to combat loneliness and social isolation has risen from research illustrating the deleterious effects of social disconnectedness, which include increased risk for premature death, cardiovascular disease, diabetes, depression, and suicidality, among other disease states. Young adults are considered a high-risk group, with up to 79% experiencing loneliness.

Rationale: The IHI Model for Improvement assists organizations in implementing change by prompting them to consider what they are trying to accomplish, what improvement will look like, and what changes will facilitate success. University student health centers in Utah, including BYU, do not utilize validated screening tools for loneliness identification. Surgeon General Vivek Murthy has encouraged healthcare systems and workers to apply and analyze evidence-based assessment tools for social disconnectedness, including the UCLA Three-Item Loneliness Scale.

Approach/Methods: This quality improvement project will be guided by the IHI Model for quality improvement to integrate the UCLA Three-Item Loneliness Scale at a university student health center to identify and treat student loneliness. Current practices will be assessed through survey and discussion questions regarding clinician knowledge, skills, attitudes, current approach, facilitators, and barriers to loneliness screening. Clinicians will be trained on social connection as a social determinant of health, proper use of the UCLA Three-Item Loneliness Scale, and interventions for students who screen positive. Changes to facilitate success will occur through rapid-cycle changes based on weekly collaboration with clinicians and weekly tracking of scale use. Post-survey measurement of the usability, satisfaction, and feasibility of the scale by clinicians will be used to analyze success.

Assessment Findings/Outcomes Achieved: Feasibility, usability, and satisfaction of clinicians regarding the use of the UCLA Three-Item Loneliness Scale will be evaluated using descriptive statistics for survey data, and open-ended questions will be analyzed qualitatively. An executive summary will be compiled based on these appraisals.

Conclusion: This QI project will provide BYU with the tools to identify and treat students struggling with loneliness, providing essential preventative care. In the future, data on loneliness prevalence can inform campus-wide initiatives that promote social connection. This intervention will lay the groundwork for implementing the UCLA Three-Item Loneliness Scale for the treatment of loneliness at universities across Utah.

Racism's Impact on Minority Nurse Well-Being: A Quantitative Literature Review

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Aim: Examine the recent, empirical, quantitative literature for evidence of racism's impact on nurses' well-being.

Background: Nursing leaders are seeking a more diverse workforce that can better provide culturally sensitive care for the growing U.S. population. However, minority nurses are underrepresented in the nursing profession; only a small minority are nurse leaders. This disparity undermines efforts to provide culturally sensitive care, foster diverse mentorship, and cultivate understanding within healthcare.

The COVID-19 pandemic significantly affected minority communities, magnifying a call to address the racial disparities in our profession. The current nursing shortage highlights the importance of identifying root problems that may lead to burnout and attrition - especially among minority nurses. Minority nurses face the combined challenge of providing excellent care while experiencing microaggressions, and other forms of racism by colleagues, patients, and the healthcare system. In the U.S., racism/discrimination is a barrier that may underlie systemic issues impeding the recruitment, education, and interpersonal relationships of nurses. It's important to understand how this burden impacts their well-being.

Methods: Joanna Briggs's scoping review guidelines and PRISMA-ScR reporting were used to conduct this literature review. Eight databases were searched in May and September 2023. Studies were included if: 1) the impact of racism/discrimination on well-being was examined using empirical quantitative methods, 2) licensed nurses (including nursing assistants) working in the U.S. were studied, 3) the study was published within the last 20 years, and 4) the study was published in English. After full-text screening and discussion to resolve disagreements, 8 studies were included. There were five journal articles and three dissertations; Six of the studies exclusively sampled nurses, one sampled CNAs, and one was mixed-sample with PAs and NPs. Quality review was done on each study.

Findings: Racism manifested in the clinical setting through race-related stress and microaggressions contributing to a negative racial climate. Half of the articles studied the experiences of Black/African American nurses (and nursing assistants); the other half represented multiple ethnic groups. The evidence documents race-related stress that was associated with increased occupational stress, depressive symptoms, compassion fatigue, and emotional distress among minority nurses.

Implications: A small body of literature suggests that racism negatively impacts minoritized nurses' well-being in the U.S., however the quantitative data addressing the impact of racism/discrimination on nurse well-being is limited. The scarcity of research focusing on the experiences of nurses from minority groups other than Black nurses represents a significant gap in the literature. Future studies should aim to investigate the impact of racism on nurses from a broader range of ethnic and racial backgrounds. Quantitative studies with larger samples are needed to fully understand minoritized nurses' experiences of racism and its impact on the profession. Such studies could help shape workplace policies that prioritize minoritized nurses' well-being and retention in the workforce.

Perceptions of Providing Continuous Blood Glucose Data for a Research Study

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Background: Acute care nurses are essential to preserve quality and quantity of life of hospitalized patients. However, nurses present with a higher risk of type II diabetes compared to other licensed healthcare providers, especially if assigned to night shifts, despite controlling for modifiable lifestyle factors such as diet and exercise. Laboratory studies suggest that eating during the night hours may cause an aberrant glucose response. It is hypothesized that consistently eating a meal during night hours may provide one mechanism for increased risk of type II diabetes development among night shift workers, yet field studies confirming these relationships are lacking. Studies collecting accurate blood glucose measures may help inform innovative strategies to preserve the health of registered nurses.

Purpose: To describe nurse perceptions of participation in a continuous blood glucose study.

Methods: Frontline, 12-hour shift nurses who were not pregnant/breastfeeding or suffering pre/diabetes and working on one of two adult intensive care units at a large medical center in the Pacific Northwest were invited to participate in this observational study. Interested nurses were directed to complete an online screening form, with the option to e-consent if eligibility criteria were met. Once consented, nurses were instructed to meet with research staff on the last off-duty day before working 3, consecutive shifts followed by 4 off-duty days. During onboarding, research staff inserted a continuous glucose monitor (CGM) on the participant as well as an activity monitor and provided a printed “to-do list” to ensure protocol compliance. Participants returned the activity monitor and had CGM data uploaded at the end of the 4th off-duty day and completed a questionnaire on experiences participating in the study.

Results: Out of approximately 152 nurses on the units, 62 (40.8%) self-screened, 61 were eligible, and 49 provided consent. In all, 12-night shift and 10-day shift nurses coordinated the correct schedule and completed the protocol. Participants unanimously rated the CGM as extremely easy to use and 19 out of 20 (95%) reported they would be willing to participate in a similar study in the future. Open-ended feedback from participants were very positive toward the study, with quotes such as: “Devices were comfortable and did not interfere with clothing or exercise.” “It (the study) was easy and didn’t require a lot of work.” “I’m excited to find out what my glucose was throughout the study.” “The activity monitor and CGM were set it and forget it.”

Conclusion: Frontline nurses demonstrated substantial interest in a study collecting CGM data. Most study participants rated the device as extremely easy to use and would participate in another similar study. A barrier to this study was the required shift schedule of 3 consecutive shifts, followed by 4 off-duty days. Future studies should consider allowing variable shift sequences.

Implications for Practice: Understanding the impact of night shift work on acute and chronic changes to blood glucose is imperative to mitigate risk for diabetes. Our study suggests that collecting these data from frontline, critical care nurses using a subcutaneously-attached CGM is feasible, simple, and reproducible.

Funding: Allen Foundation

A Cultural Humility Framework to Create a Virtual Reality for Health Professionals

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Purpose: To disseminate a nurse-led methodological approach to creating a virtual reality (VR) experience for interdisciplinary health professions students. This VR project created through the lens of cultural humility aimed to improve student awareness of how social determinants of health (SDoH) impact a patient’s ability to follow a plan of care.

Description of Methods: Clinician and community-dwelling minoritized patient focus groups were conducted to inform realistic scenarios for the VR programming including an outpatient office, a pharmacy, and a patient’s home. Leading health organizations have stated the importance of including community participation in healthcare interventions tends to improve health outcomes for minoritized patients and families. The research team, composed of an interdisciplinary team of healthcare providers, Entertainment Arts and Engineering faculty and students collaborated on concepts of the VR scene including background, characters, dialogue, and gaming interface. The interdisciplinary team worked collaboratively on a Design Box process, a commonly used method for exploring experiences and formulating ideas to develop scenarios in VR programming. Each scenario was tailored to have the VR user fully immersed in realistic experiences and to address challenges such as a difficult diagnosis, unintelligible dialogue from a provider, and financial dilemmas. The resulting VR incorporates gamification elements including a visible meter for pain and nausea, and a virtual wallet for daily expenses. Each meter fluctuates based on the choices the student/user makes. The VR experience concludes with a faculty lead debrief to address three pillars of cultural humility including self-reflection, systemic racism, and power balance when addressing SDOH.

Link Method to Practice: Leading healthcare organizations have prioritized interdisciplinary education to mitigate health disparities due to clinicians’ lack of proficiency in addressing SDoH. VR has entered healthcare education with strong results in preparing students’ clinical skills. VR provides a safe and effective learning environment for delivering content to address cultural humility and has demonstrated improved efficacy in the long-term retention of communication skills and mitigating implicit bias. However, few studies exist that examine the impact of VR to improve awareness of how SDoH impact patients and contributes to inequitable care. VR provides a more cost-efficient, standardized, scalable training approach to healthcare education. In addition, applying game elements to a non-game context, called gamification, increases user engagement, motivation, academic achievement, and socialization, which leads to improved clinical reasoning and decision making. Pairing VR with facilitated debriefings has demonstrated long-term improvements in behavioral skills, including self-awareness and efficacy in promoting empathy, a vital component of mitigating health disparities.

Conclusion: This nurse-led, highly scalable approach using realistic immersion provided by VR has the unique opportunity to integrate into interdisciplinary curriculum, improve interdisciplinary education, and raise awareness of the impact of SDoH. This interactive approach provides a platform for cultural humility and has the potential to foster a life-long ability to reflect on factors that impact all patients’ lives. The use of VR to augment healthcare education is rapidly evolving and has potential to make great strides to improve awareness of how SDoH impact equitable care for patients and families.

Feasibility of Web-Monitoring Software Methods to Measure Online Misinformation

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Introduction: Cancer patients often seek cancer-related information online. However, there is currently no established objective method to measure online exposure to misinformation about cancer or other topics. This gap in research is of particular concern for nurses, who are typically a primary source of health information for patients in a clinical setting. We tested the feasibility of using web-monitoring software to quantify exposure to and describe characteristics of online cancer health misinformation and the impacts this may have on cancer patients.

Methods: We used commercial web-monitoring software to quantify online cancer misinformation exposure in a prospective study of cancer patients. Participants completed a baseline survey, used the software for 30 days, and then completed a follow-up (FU) survey. Once installed, the software screenshots when the participant views or types an “alert word” from a published dictionary of 61 cancer terms (e.g., cancer, chemotherapy). These screenshots are the units of analysis for quantifying exposure and describing misinformation characteristics. We generated summary statistics of feasibility outcomes (implementation) among participants using Likert-scale survey questions asking about ability to install, ease of installation, and comfort levels of using the web-monitoring software.

Results: N=57 participants took the baseline survey; of these, 17% (n=10) did not have administrative privileges on their devices or they only used mobile devices (26%, n=15), and so they were ineligible. Others dropped out before the web-monitoring period due to software installation complications (14%, n=8) and 7% (n=4) declined because they were uncomfortable with the idea of web-monitoring. To date, 30%, n=17 participants have completed the full web-monitoring period and follow-up survey; 94% of these participants (n=16) felt comfortable with the use of web-monitoring for research.

Conclusions: Web-monitoring software could address existing gaps for measuring and characterizing online cancer misinformation exposure, which could ultimately help healthcare providers better understand the information needs of their patients. Nurses who understand characteristics of online cancer misinformation may be better equipped to interact with patients in clinical settings. Our results suggest this methodology is acceptable but that technological capabilities may limit participation. We recommend monitoring on mobile devices and offering participants devices with preinstalled software to increase implementation feasibility of this novel approach.

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Impact of Patient Prioritization on Patient Wait Time in the Urgent Care Setting

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Purpose: The purpose of this project is to create a new patient prioritization workflow to reduce wait times for high acuity patients and mitigate the risk of delayed care leading to potential sentinel events.

Rationale/Background: The main purpose of urgent care clinics is to provide prompt medical attention for patients with urgent medical needs. Urgent care clinics lack standardized patient prioritization processes, potentially leading to extended wait times and compromised care quality. Urgent care clinics need to be positioned to prioritize the patients to appropriate levels of care. By establishing a structured patient prioritization process, they can effectively allocate health care resources, enhance patient satisfaction, and improve safety.

Brief Description of the Undertaking/Best Practice: Guided by the Johns Hopkins Evidence-Based Practice model, this project entails the development of the new workflow that initiates patient prioritization at the registration desk. A devised algorithm guides registration staff in swiftly directing patients to nurses based on presenting complaints. Subsequently, the Patient Prioritization Severity Index, created by a project team, based on the Emergency Severity Index, aids in categorizing patients into, facilitating swift evaluation by a clinician. In addition, to facilitate comprehension and adoption, a 45-minute group training session will introduce the new workflow and the Patient Prioritization Severity Index. Information sheets outlining the algorithm for registration staff and the Patient Prioritization Severity Index will be provided at registration and nursing desk, enhancing accessibility.

The primary outcome is improvement in wait times for immediate and urgent patients. Wait times refers to the interval from patient registration until seen by the clinician. This will be measured through a medical record review before and weekly after the project initiation. Secondary outcome involves assessing nursing staff knowledge about the patient prioritization through 10 clinical scenarios before and immediately after training. Additionally, the feasibility of continuing with the new workflow and the Patient Prioritization Severity Index will be assessed with one Likert scale question and the completion rate of the Patient Prioritization Severity Index upon completion of the project.

Assessment of Findings/Outcomes Achieved: In-progress. The project's results will be available for the conference.

Conclusion: Anticipated findings suggest that implementing the new standardized prioritization tool will foster better patient identification and enhance clinic throughput.

Learner's Perception of an Obstetric Healthcare Simulation Escape Room

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Purpose: The purpose was to evaluate the learner's perceptions and impacts of a healthcare simulation escape room (HSER) related to an obstetric hemorrhage.

Background: An escape room is a creative and fun way to reduce student fears, have an experiential learning opportunity, improve teamwork, and increase knowledge related to the emergency of an obstetric hemorrhage. There needs to be more literature on escape rooms as a teaching modality in nursing education. Adult learners in nursing school are expecting innovative teaching strategies involving experiential learning. The goal of nursing faculty is to develop ways to improve subject content mastery for learners. An escape room is a new strategy to satisfy faculty goals and learners' requests in nursing education.

Methods: An HSER was introduced during the third semester of a six-semester bachelor's degree program in their Reproductive Health Course. Learners were prepared with didactic content the week before the HSER experience to build the foundation of content learning. Learners were divided into teams of three to four students. All learners were required to complete the HSER as a course requirement. Learners were expected to work as a team and were given specific guidelines and instructions during the prebrief. The HSER had a 40-minute time limit in which the learners' solved clues and puzzles and collected 12 puzzle pieces. A debrief session occurred immediately following the HSER. The learners who consented to the research were given a Learner Satisfaction Survey after the debrief session. An Impact of an Escape Room survey was administered at the end of the semester to evaluate learners' perceptions of their ability to retain and apply the obstetric hemorrhage content in the clinical environment. Both surveys were created by a team of simulation and content experts and were a 6-point Likert scale.

Result: Both surveys were collected over six semesters. The first survey had a sample of 207 learners, and the second had a sample of 182. Learners expressed that the HSER was a fun, engaging, different way to learn and apply important content. The data from the learner satisfaction survey was positive (*M* = 5.73, *SD* = 0.73 to *M* = 5.94, *SD* = 0.24). The impact of an HSER survey examined if an HSER would positively impact the learners' perceptions of the application of content during clinical. The data from the impact of the HSER survey was positive (*M* = 5.54, *SD* = 0.77 to *M* = 5.71, *SD* = 0.54). Additionally, learners described increased knowledge of the tools and procedures to manage an obstetric hemorrhage. They demonstrated how they could assist with managing an obstetric hemorrhage during their clinical rotation.

Conclusions: Using an escape room strategy, students completed the experience with success, which in turn improved their overall confidence and positive perceptions of their skills, knowledge, and attitudes. Future research needs to move from learner perceptions of HSER to testing if it can assist with developing clinical judgment.

Applying Reflexive Journaling to Understand a Marginalized Population

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Purposes/Aims: The purpose of this presentation is to discuss the experience of reflexive journaling to understand a marginalized population and examine the contribution of journaling to the final qualitative analysis.

Description: Reflexive journaling is a method for increasing the trustworthiness of qualitative data by improving the investigators awareness of their biases and their potential impact on data analysis. In this study, the principal investigator immersed herself with the study population of recreational-vehicle-dwelling full-time American nomads (RVFANs). She made frequent notations in a paper journal about her experiences living in a recreational vehicle and interacting with RVFANs. She explored potential biases based on her values and previous experiences and considered how RVFANs' perceptions may have differed based on their unique perspectives. She documented her thoughts on the progress of the study and methodological issues. The investigator will share strategies that were useful for facilitating reflection and discuss how she applied the insights gleaned from journaling.

Logic Linking Theory/Concept/Method to Practice or Research: In qualitative research, the researcher is the instrument that analyzes and synthesizes raw data to create useful findings. Marginalized populations living alternative lifestyles may not share the hegemonic discourse. Qualitative data collection facilitates freedom of responses. However, novel perceptions could be overlooked if the researcher instrument is not sensitive to the influence of their own assumptions. Few research reports include specific information about the steps of the journaling process or describe how to apply the knowledge gleaned from journaling. Effective reflexive journaling can enhance the sensitivity of the researcher instrument and improve the credibility and authenticity of findings.

Conclusion: Qualitative data collection is useful for health equity research because the freedom of responses allows marginalized populations to express perspectives that may not have been anticipated by researchers who are not members of the same group. Reflexive journaling is a useful tool for reducing the effect of researcher bias when used effectively.

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What Is a ‘Peaceful Death’ for Adults with Advanced Stage Cancer? a Concept Analysis

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Introduction/Background: Dictionaries define peace as "tranquility," "no turmoil," and "not at war." Unfortunately, in America there is a stigma surrounding palliative and hospice care for adults with advanced stage cancer who associate these practices with “giving up”, rather than opportunities for a ‘peaceful death’. Our lack of understanding of what it means to have a ‘peaceful death’ likely impacts the fact that these beneficial palliative and hospice supports and services are often not utilized and/or are only initiated in the last days of life. Moreover, the concept of a ‘peaceful death’ has many meanings to different cultures based on varied personal experiences, beliefs, and social context. Thus, a clear definition is needed, especially in the field of cancer care. Such conceptual clarification will help families, care providers and health systems more effectively support patient wishes for a peaceful death and relieve unnecessary suffering.

Purpose: Guided by Walker and Avant’s 8-step method of concept analysis, this study aimed to analyze and clarify the concept of a peaceful death, determine its attributes, and highlight the importance of addressing this critical issue for adults with advanced stage cancer.

Methods: Literature review was performed using the databases PubMed, CINAHL, and Google Scholar with search terms “peaceful death” “A good death” “end-of life” AND “cancer” AND “hospice” or “palliative care” with the results explored to extract the concept’s defining attributes. A search of the literature found models of its uses, antecedents, consequences and empirical referents. Characteristics seen in model cases of peaceful deaths were contrasted with those of traumatic death experiences as contrary cases.

Results: The five primary defining attributes of a peaceful death included: 1) No pain or suffering; 2) Experience dignity and respect; 3) Acceptance with no unfinished business; 4) Caregivers experience fulfillment; 5) Harmony in personal relationships. Summarizing these results in the analysis, the author created the following definition of what a peaceful death in adults with advanced stage cancer is: *A peaceful death for adults with advanced stage cancer is when their end-of-life care decisions are honored and they do not feel they have given up, but have been given the gift of a natural human experience without physical or emotional suffering.*

Conclusions/Implications: By clarifying the concept of a ‘peaceful death’ for adults with advanced stage cancer, we improve our overall understanding of their common end-of-life care wishes to better guide individualized care planning and ensure comfort needs are met. The five primary defining attributes of a ‘peaceful death’ and resulting definition can specifically guide care teams working with this population and their families to: 1) Educate them on how to obtain a peaceful death; 2) Assist them in end-of-life planning to personalize their vision for a peaceful death; and 3) Relieve unnecessary suffering through nursing practices that support their individual concept of a peaceful death.

Parental Cancer and Child Outcomes: A Systematic Review of Behavioral Interventions

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Aims: The purpose of this systematic review was to synthesize the evidence regarding the impact or efficacy of behavioral counseling or educational interventions delivered to families with youth facing parental cancer. Aims: 1. Describe interventions that assessed child outcomes. 2. Identify theoretical frameworks undergirding interventions. 3. Describe operational elements of interventions. 4. Describe methods used to maintain and monitor intervention dosage and fidelity.

Background: Annually, approximately 200,000 youth experience their parents' cancer diagnosis. Literature has documented that children and parents struggle with elevated anxiety, depressed mood, and diminished behavioral-emotional adjustment. Additional studies describe parents' struggles of not knowing what to say and do to diminish the trauma of cancer in the child's life. Still unknown is the number and success of behavioral intervention studies involving parents whose goals were to improve child outcomes.

Methods: Five electronic databases (CINAHL, PubMed, PsycINFO, Web of Science, & Embase) were searched. PRISMA 2020 guidelines were followed. Eligibility included articles written in English from January 1, 2012 to February 22, 2023, used an RCT or quasi-experimental design, including pilots, in which the intervention was delivered to parents, parent-child dyads, or households, focused on psycho-emotional adjustment to cancer, in which intervention details were provided with ≥1 quantitative measure, and included outcomes of a child, between ages 5-19 years, whose parent was diagnosed with cancer. Articles were excluded if the intervention was delivered solely to the child or if the child had cancer. A total of 703 articles were retrieved. Of these, 588 were removed because they did not meet inclusion criteria and 104 because they were duplicates. After verifying inclusion and exclusion criteria by reviewing title, abstract, and full text, 11 articles remained for analysis.

All 11 articles were analyzed and tabled by all 4 authors for study sample, study design, intervention theory or framework, operational elements of the intervention [number, duration, interval, content, and channel of intervention sessions]; outcome variables; study results, validity and reliability of measures, fidelity/dosage, and training; and enrollment and attrition rates. Risk of bias was reported using the Downs and Black checklist for clinical trials.

Assessment of Findings: Final results of the systematic review will be presented at WIN. Preliminary results from the search yielded only 11 clinical trials, including 5 that used a quasi-experimental design. Only 7 [64%] of those trials achieved statistically significant outcomes on children's functioning. Measurement models relied heavily on self-report, questionable measures, and articles contained limited information on validity and reliability. Interventions, regardless of study design, were largely non-specific. Dosage and fidelity were not well documented, raising serious threats to the internal validity of the intervention. Control groups were often under-described. Interventions varied enormously in the specificity with which the underlying theory was operationalized.

Implications: Scientists need to form a consensus panel and write a white paper to establish the minimum required guidelines to report quasi-experimental or experimental intervention studies. In the absence of such a white paper, the standards for reporting are limited to journals, reviewers, and the reporting standards within each journal.

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The Feasibility of Using Simulation to Support Nursing Readiness for Post-Mortem Care

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Purpose: The aim of this study is to evaluate the acceptability, appropriateness, and feasibility of high-fidelity simulation to increase self-efficacy of nursing students in providing end-of-life and postmortem care.

Background: Data shows that nursing students and new graduate nurses express anxiety and fear about providing end-of-life and postmortem care. Fears extend beyond the educational setting and into practice, which is often the first time nurses encounter a patient who is dying/has died. Low levels of self-efficacy have the potential to negatively impact elements of end-of-life care such as processing of personal emotions, communication with the patient/family/care team, providing care using cultural humility, and the ability to care for the deceased body. However, simulation has been shown to help students meet educational outcomes in palliative care and, when delivered according to the International Nursing Association of Clinical and Simulation Learning (INACSL) Standards of Best Practice, may be used to increase self-efficacy in providing postmortem care. Anecdotal evidence indicates that providing simulation education on specific elements of end-of-life and postmortem care to undergraduate nursing students has been successful. Students are able to explore the scope of nursing practice in facilitating end-of-life care discussions, setting end-of-life care goals, addressing withdrawal of care with family members, consoling family after the patient dies, and preparing the deceased body for transport to the morgue. In debriefing, students reported having a safe space to process their feelings and discuss their cares and concerns with peers and trained simulation faculty, which aided in preparation for situations they will inevitably encounter post-graduation.

Methods: A pre-post intervention design is being used for this feasibility study. Study participants (N=30) include prelicensure nursing students during the final semester of the BSN program, at a private university in a western state. All participants will receive a 4 hour end-of-life and postmortem care simulation experience intervention. Conley's End of Life and Postmortem Self Efficacy Scale will be administered both pre and post simulation experience to measure increase in students' reported self-efficacy. The mean change from pre- to post-intervention will be calculated.

Measures of simulation intervention acceptability (AIM), appropriateness (IAM) and feasibility (FIM) will be assessed post-intervention (range=4-low to 20-high). Frequencies, percentages, confidence intervals, and mean±SE for AIM, IAM and FIM will also be calculated.

Anticipated Results: Although pending, the anticipated results will demonstrate an increase in reported self-efficacy, as well as the acceptability, appropriateness, and feasibility of the end-of-life and postmortem care simulation experience.

Implications and Future Research: Nursing students' express anxiety and fear about providing end-of-life and postmortem care, which often impacts them as they enter into practice. Learners express gratitude for the opportunity to practice end-of-life and postmortem care in a safe, low stakes setting using simulation, with debriefing time included to help process emotions. Using formalized simulation education in the BSN curriculum is needed to develop confidence in providing end-of-life/postmortem care. Findings from this study will inform recommendations for BSN curriculum content, as well as guide a larger scale, longitudinal study assessing comfort with these cares after entry into practice.

Patient Uncertainty in Life-Limiting Illness: A Nursing Communication Framework

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Purpose: This conceptual framework aims to integrate the Reconceptualization of Uncertainty in Illness Theory, the Problematic Integration Theory, and current nursing palliative care communication research to develop a conceptual framework for non-advanced practice nurse communication. A subsequent aim of this framework is to clarify how early palliative care communication and chronic uncertainty in illness communication inextricably coincide.

Description of Conceptual Framework: Uncertainty in illness is an inability to determine the meaning of illness-related events, which prevents the decision-maker from understanding or assigning value to the objects and actions surrounding their illness. Different types of uncertainty include: inconsistency, divergency, complexity, ambivalence, unpredictability, impossibility, and ambiguity. Personal factors associated with uncertainty fall into four categories: cultural, social, biological, and psychological. The trajectory of uncertainty in serious life-limiting illness is not linear but cyclical, overlapping, and fluctuating. Communication is central within this framework. Nursing communication is continually changing and adapting along with their patients' uncertainty. No one communication process can be assigned to the types of uncertainty because the type of communication needed for every variation of the patient experience is innumerable. Instead, communication is an inseparable concept integrated with every factor and type of uncertainty.

Links to Nursing Practice and Research: Non-advanced practice nurses are ideally situated to discuss patients' feelings of uncertainty and, subsequently, initiate early palliative care discussions, because they frequently care for patients with serious life-limiting illnesses *before* critical care is necessary. Yet, most palliative care communication research focuses on palliative care teams and specialty nurses. Physician perspectives drove previous approaches to communication training and mainly addressed the stress of imparting bad news. However, the non-advanced practice nursing role is fundamentally different, involving communication once uncertainty has been introduced and providing ongoing care as uncertainty ebbs and flows throughout a patient's lifelong illness trajectory. Developing an applicable and utilitarian nursing communication framework requires incorporating a caring nursing perspective into health communication research that explicitly situates early palliative care communication within a non-advanced practice nurse's scope.

Conclusion: This framework represents the integrality of all facets of uncertainty for those living with severe life-limiting illness (the person, the type of uncertainty, and the communicatory process) and attempts to conceptualize uncertainty communication as a series of events happening simultaneously and not simply a cause-and-effect process. Therefore, this framework encourages nurses' holistic understanding of the complex nature of uncertainty in life-limiting illness, highlights the integral communicatory role nurses have in their patients' experience, and promotes further nursing-specific communication research. Future implementation nursing research focusing on enabling nurse-initiated early palliative care communication will support patients' values and dignity throughout more than a single hospital stay but their entire disease trajectory.

Wound Education in Individuals with SUD to Affect Attendance and Retention in MAT

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Background: Individuals with substance use disorder face many barriers, including stigma, embarrassment, and marginalization due to disease processes. Individuals with skin injuries related to substance abuse face additional stigma, resulting in poor retention in medication-assisted treatment programs.

Purpose: This project aims to provide educational support and tools to healthcare providers who can then provide wound education and tools to patients to improve attendance in medication-assisted treatment.

Methods: Quality improvement project utilizing quasi-experimental design with the key variable of attendance before and after implementation. A convenience sample from patients enrolled in medication-assisted treatment in a small holistic health setting.

Data Analysis Plan: Repeated measures ANOVA. Three months of attendance data measured prior to intervention. Attendance measured at 2 weeks, 1 month, 3 months post intervention.

Anticipated Outcomes: Improved attendance and retention in MAT. Potentially improved rates of wound healing, improved self-efficacy in patients, improved self-efficacy and confidence in nursing and providers related to wound management. It is also anticipated that there would be improved wound healing with consistent evidence based wound care.

Implications: As advanced practice nurses, we are taught the importance of education but provided little time to apply knowledge adequately. It is the hope that this study represents the importance of education as a foundation for practice.

Keywords: Substance Use Disorder, Medication Assisted Treatment, skin and soft tissue infections, retention, attendance, Opioid Use Disorder, Xylazine

Nursing Care of Severely Obese Patients in Critical Access Hospitals

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Purpose: The purpose of this qualitative study is to explore the nurses' experience in caring for severely obese patients in Critical Access Hospitals (CAHs).

Background and Rationale: Patients who are severely obese frequent hospitals more often due to obesity-related illnesses and exacerbations of these illnesses. The need for complex care and special equipment for this population is one reason for increased workload in the nursing unit. Urban hospitals have reported difficulty caring for severely obese patients due to a lack of resources, and there are fewer resources in rural areas. Research on this topic has mostly been conducted in urban settings, and it shows that quality care is lacking. Quality care is care that is safe, effective, patient centered, timely, efficient, and equitable. Nurses spend a significant amount of time with patients and are therefore key informers in this exploratory research involving quality care of severely obese patients. Nurses' experiences in caring for this population is being explored in rural areas.

Conceptual Analytical Framework: W. Edward Demings Total Quality Management (TQM) Theory focuses on assessing organizations, such as healthcare institutions, to improve quality patient care, patient satisfaction, and system management. Three TQM principles are used for this study: customer focus, teamwork, and continuous improvement.

Methods: Data is currently being collected. Qualitative interviews are being conducted using a phenomenological approach. IRB permission was obtained to conduct the study. Participants are being recruited via email in Oregon. An online survey is being used to screen for inclusion and exclusion criteria. Interviews are being conducted using a semi-structured questionnaire. The interview questions were created by the principal investigator (PI) using evidence from prior published literature and TQM principles. At the time of this abstract submission, 7 interviews have been completed. Interviews are being conducted via Zoom and transcribed using Otter.ai. Preliminary data has been analyzed using the TQM framework. Data collection will continue until saturation has been reached.

Preliminary Results: Preliminary results reveal several interesting categories including nurses' perceptions about patient beliefs, racial disparities, nurses' beliefs, increased workload, use of teamwork, geographic location, and lack of resources (including understaffing). In the TQM category of customer focus, some nurse's perceptions about patient beliefs reveal patient embarrassment during care, thankfulness to the care team, language barriers, cultural barriers, and blame. In the TQM category of teamwork, nurses report group care with heavier workloads. In the continuous improvement category, CAHs nearer to urban areas are reported to have more equipment than those further away and newer equipment in the last 5-10 years. Lack of resources was also prominent in the preliminary data including not enough equipment and understaffing.

Implications: New results indicate that there are benefits to being closer to an urban area and nursing teamwork. This study's results will be useful in helping to pinpoint areas for future opportunities in improving quality care. Future research should focus on patient perspectives and objective measures of quality.

Bridging the Gap: Enhancing Rural Oncology Care with a Provider Toolkit

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Purpose: Our objective is to enhance providers' and staff's understanding of the Huntsman at Home Rural (HHR) Program, as part of a quality improvement initiative. The initiative seeks to elevate referral rates and facilitate access to high-quality local care for rural oncology patients.

Background: Patients living with cancer who reside in rural areas face significant healthcare disparities due to geographical isolation and a lack of specialized oncology providers. These patients often endure arduous journeys exceeding 100 miles each way to access specialized oncology care, leading to a higher likelihood of presenting with advanced metastatic disease.

Local Problem: The HHR Program, an innovative at-home oncology care initiative, has been operational for two years. While it holds promise in addressing rural healthcare disparities and improving access to care, underutilization from outpatient clinics suggests that limited awareness and misconceptions among clinic providers, staff, and patients may hinder its potential impact.

Approach: We are currently evaluating healthcare providers and clinical staff at Huntsman Outpatient Oncology Clinics to enhance their ability to refer rural oncology patients to the HHR program. This assessment will inform a concise 10-minute information session about key components of the referral toolkit, with the aim of reducing healthcare disparities and enhancing rural oncology care.

We employ the pre-implementation questionnaire (PREIQ) to collect demographic data, including age, gender identity, years of oncology practice, specialization, and certifications. The PREIQ also explores awareness of the HHR program, opinions on telehealth quality, and the utility of nurse assessments prior to a telehealth visit. We also inquire with clinical staff about usefulness of email notifications for eligible patients. Data from the PREIQ will help to further customize the toolkit to meet the knowledge and resource needs of each clinic. A post-implementation questionnaire (POSTIQ) questionnaire will be used to assess both the usefulness of the referral toolkit and information session effectiveness, content satisfaction, necessary additions, and qualitative feedback. The POSTIQ results will guide continued toolkit customization and implementation strategies.

Anticipated Outcomes: The establishment and adoption of the HHR Program referral toolkit within Huntsman Outpatient Clinics are anticipated to enhance providers' and staff's understanding of the HHR Program and boost referral rates. Sustained toolkit management will offer ongoing education and resources to further enrich providers' and staff's knowledge and facilitate patient education about the HHR Program.

Conclusions: Ensuring accessible, high-quality healthcare for oncology patients residing in rural communities goes beyond convenience; it is a matter of equity and quality of life. Increasing referrals to the Huntsman at Home Rural (HHR) Program signifies a significant step toward reducing healthcare disparities, offering patients the opportunity to receive timely, specialized care within their own communities. By strengthening healthcare equity, we enhance the patient experience and contribute to the overall quality and efficiency of the healthcare system, fostering healthier, more vibrant rural communities. This initiative lays the groundwork for a healthcare landscape where geography does not dictate the quality of care, ensuring every oncology patient, regardless of their residence, can access the quality care they deserve.

Highly Nitrated Groundwater and Neural Tube Defects in California Farmland

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Purposes/Aims: The purpose of this study is to evaluate the relationship between exposure to contaminated groundwater high in nitrates and the rates of neural tube birth defects in the agricultural working communities of the San Joaquin Valley, California.

Rationale/Conceptual Basis/Background: According to the 2021 San Joaquin Valley Region Report on Impacts of Climate Change, worsening climate change has degraded water quality and reduced its availability in the San Joaquin Valley (SJV). The issue of climate-change-associated water quality issues has not been deeply explored, but it is obvious that the communities hit the hardest are rural, disadvantaged, Hispanic agricultural communities with longstanding poor access to clean drinking water. According to the Environmental Working Group (EWG)'s 2020 report on nitrate contamination in the SJV, the worst nitrate water pollution in California occurs in eight counties where agricultural farm work is most prevalent. Previous studies have shown that adverse fetal outcomes can occur at nitrate level exposure as low as 5mg/liter, and congenital malformations such as neural tube defects (NTDs) have been shown to occur at 10mg/liter of nitrate exposure in drinking water.

Methods: A retrospective review utilizing data from the California Birth Defects Monitoring Program (CBDMP) and the United States Environmental Protection Agency's (USEPA) water quality data program is being conducted, to correlate areas of high nitrate concentration in the groundwater (>10 mg/L) with the number of neural tube defects reported in that area. The geographical focus will be the Environmental Working Group's list of the top 3 "San Joaquin Valley Community Water Systems with the Worst Nitrate Contamination" report that was published in 2020. The number of infants born with NTDs whose mothers lived in proximity to and consumed drinking water from these three water systems within the timeframe of one month prior to their last menstrual period and the first three months of their pregnancy will be analyzed and reported.

Anticipated Results: We expect there will be a correlation between the communities with the highest nitrate levels in their groundwater systems (>/= 10mg/L) and a more frequent than average occurrence of BDs, specifically neural tube defects.

Conclusions/Implications: California's Fourth Climate Change Assessment released in 2021 lists "proximity to pre-existing sources of pollution" as a source of vulnerability for populations affected by climate change. Magnifying this inequality for the Hispanic agricultural worker population in the SJV are the additional vulnerabilities of social inequality, below-poverty line incomes, as well as language and education barriers. According to the report released by the Pacific Institute and Environmental Justice Coalition for Water in 2017 called "Drought and Equity in California": water inequities have always existed in California, but the recent droughts have magnified these inequities and hit vulnerable populations dependent on water for their livelihoods in the agricultural communities the hardest. Birth defects that are caused by these environmental and social inequalities are an important intersection of environmental and reproductive justice, and knowledge of them can influence future policies and prevention strategies.

Embedding Community Health Workers into an Integrated Healthcare System

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Purpose: To conduct a needs assessment for hiring Community Health Workers (CHWs) as full-time employees in an integrated healthcare system, specifically in three geriatric clinics, who care for underserved rural older adults across Utah and develop a strategic plan to improve the care and address health disparities for our underserved rural older adult patients.

Background: Older adults in rural locations consistently have poorer health outcomes than their urban counterparts and are likely to experience contributing factors that impact health, such as lack of access to healthcare services, limited transportation, lower socioeconomic status, and increased incidence of chronic disease. CHWs are valuable healthcare team members in rural areas with limited health services. They work towards improving health outcomes and help bridge the gap in health disparities. Utilizing CHWs is a cost-effective strategy; however, barriers to consistent funding of CHWs salaries impede successful utilization of CHWs. CHWs are often hired by county or state government organizations that act as referral points between patients, community resources, and health systems. Hiring and embedding CHWs as employees of an integrated healthcare system may help overcome systemic barriers and provide a sustainable model of care for vulnerable older adults in rural communities.

Local Problem: A large integrated healthcare system in the Mountain West currently serves the largest geographic area of any health system in the United States, with predominantly rural and frontier-designated counties. Only five of the 29 counties within Utah are designated as urban counties. Three geriatric clinics serve many underserved, vulnerable older adults living in rural Utah. Hiring CHWs as employees of the integrated healthcare system can help improve clinical and social outcomes. As part of the coordinated care team, the CHW can facilitate a better understanding of patients' and families' cultural and social needs, promoting a holistic and inclusive approach that can offer a seamless and supportive healthcare experience at home and in clinical settings.

Methods: The Johns Hopkins Evidence-Based Practice Nursing Model provides the framework for this project to synthesize and translate evidence. A business case for the project has been developed. A semi-structured guide was designed to identify needs, attitudes, and experiences with CHWs for stakeholder interviews and discussions in the geriatric clinics. Data will be recorded, categorized, and analyzed. Retrospective chart reviews with inclusion and exclusion criteria are being conducted to collect data on our rural patients. Descriptive statistics will be used to describe the data. A SWOT analysis will examine internal strengths/weaknesses and external opportunities/threats.

Assessment/Findings: An Executive Summary will be developed from current findings and national data and presented to stakeholders and organizational leadership. The executive summary will include a strategic plan with specific stakeholder recommendations.

Conclusion: The needs assessment will provide the necessary data for the healthcare system to determine what needs to be accomplished for CHWs to be hired in the geriatric clinics as part of the care team to meet the needs of our underserved older adults in rural Utah.

Heat-Related Illness and Electrolyte Imbalance in Florida Agricultural Workers

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Purpose: To examine relationships between dehydration, electrolyte imbalance, and heat-related illness (HRI) symptoms among outdoor agricultural workers in Florida during the summer work cycle.

Background: Agricultural workers belong to an occupational sector that is vulnerable to excessive heat exposure. With rising global temperatures, heat-related mortality risk in US agricultural workers is almost 35 times greater than that of the overall workforce.

High ambient temperatures and strenuous activity combined with dehydration and excessive sweating has been documented to cause electrolyte imbalance. Excessive electrolyte imbalance has been reported to cause cardiac arrest, seizures, coma and even death. However, electrolyte imbalance has not been studied in agricultural workers who have chronic excessive heat exposure and report high rates of heat-related symptoms, such as heavy sweating, headaches, and muscle cramps.

Methods: In August 2022, in collaboration with the Farmworker Association of Florida, a convenience sample of 73 workers were recruited in Apopka, Florida. Blood and urine samples were collected pre- and post-workdays to determine electrolyte imbalance and dehydration. Using the ATAGO pocket refractometer, urine specific gravity was measured. A basic electrolyte panel (sodium, potassium, chloride) was taken pre- and post-workday by finger stick using the iSTAT® Blood Analyzer and Chem-8 cartridge.

Simple statistics (i.e., proportion, mean, standard deviation) were used to characterize the population with respect to the target variables. Logistic regression models were used to assess relationships between hypokalemia (serum potassium<3.5mmol/L), hyponatremia (serum sodium<136 mmol/L), dehydration (urine specific gravity>1.020), reported HRI symptoms, and demographics.

Assessment of Findings: Among the 73 participants (mean age 43 (±7.1), 78% female, 97% Hispanic/Latino, mean years in agriculture 13.7 (±8.5)), mean work hours were 7.7 (±2.1) and average beverage consumption was 85.6 (±39.6) ounces during the workday. Agricultural work was predominantly in ferneries (n=29, 40%) and nurseries (n=26, 36%).

Thirty-two workers (44%) were dehydrated before work, and 42 (57%) workers were dehydrated after work. One worker had hyponatremia after their workday. Hypokalemia was observed in 2 workers (3%) before work and 5 (7%) workers after work. Both workers who had hypokalemia before work and 4 (80%) after work were also dehydrated.

The most common HRI symptoms reported were headache (n=10, 14%), muscle cramping (n=5, 7%), and dizziness (n=4, 6%). Of the 5 workers who had hypokalemia after work, 3 (60%) reported at least 1 HRI symptom. Of the 42 workers who were dehydrated, 15 (35.7%) reported at least 1 HRI symptom. Muscle cramping was the symptom associated with hypokalemia (Beta=2.85, p=0.106) and consumption of sugary beverages was associated with hypokalemia in logistic regression models (Beta=0.079, p=0.116); although, not statistically significant.

Implications: These findings indicate that agricultural workers experienced dehydration and hypokalemia, which may have led to HRI symptoms such as headaches, muscle cramping, and dizziness. Additional education to mitigate the effects of HRI symptoms are necessary as nurses provide care to diverse patient populations that include outdoor workers. For example, provision of water with electrolytes for workers to drink throughout the workday may have the potential to protect workers from electrolyte imbalance, HRI symptoms, and dehydration.

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RURAL HEALTH RESEARCH

Stressors and Occupational Hazards Among Latino Farmworker Adolescents: A Pilot Study

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Aims: To examine the associations between physical workload, PPE, and sanitation with heat-related illness and pesticide risk among Latino farmworker adolescents and young adults in Arizona.

Background: Limited research shows that Latino farmworker adolescents and young adults (LFW-AYA) often take on occupational risks by not wearing PPE (Arcury et al., 2015), are exposed to various pesticides and heat-related illnesses (Arnold et al., 2020; Shipp et al., 2007). Heavy physical workload also poses a threat to heat exhaustion among farmworkers (Lin & Chan, 2009) and it is the main risk factor for heat-related illness (Vega-Arroyo et al., 2019), especially when working in hot environments as it is the case of Arizona during summer time. Pesticide-safety training is limited among LFW-AYA where less than a third of LFW adolescents receive their training (Arcury et al., 2015). To date, there is limited information if physical workload would worsen pesticide exposure among LFW-AYA. Guided by a Social Ecological Model of Health (McLeroy et al., 1988; Golden, 2019), the present study addressed the following hypothesis:

H1: Physical workload and PPE, and sanitation will be predictors of pesticide risk

H2: Physical workload, PPE, and sanitation will be predictors of heat-related illness

Methods: Participants included a total of N=99 (90% males, 55% from Mexico, ages 16 to 25 years old, M*age*= 20.80, *SD*=2.4) working in agriculture in Arizona. Adolescents completed socio-demographic characteristics, measures of physical workload (Borg, 1970), pesticide risk (Runkle et al., 2013), and heat-related illness (Arnold et al., 2020). Family dependency on adolescents' income: yes (52%), no (31%), sometimes (17%). Interviewer-administered questionnaires were in Spanish and completion lasted approximately 45— 60 minutes. Participation was voluntary, and participants received a $30 monetary incentive. We also obtained an NIH Certificate of Confidentiality to secure participants' information. To address H1 and H2, we estimated two separate linear regression with pesticide risk, and heat-related illness as a function of physical workload, PPE, sanitation, and age.

Assessment of Findings: Findings partially supported H1. Specifically, physical workload was the only predictor of pesticide risk ($b= .03$, $p< .05$). Results did not support H2. Physical workload, PPE, and sanitation were not associated with heat-related illness.

Conclusions and Implications for Clinical or Educational Practice: Given LFW-AYA's family-related financial responsibilities (52% family depended on their income), it is possible that these young workers workload have doubled due to acquire more income (Sobralske, 2006), it is possible that putting more hours at work to generate more income has left them vulnerable to exercising due diligence in identifying pesticide risk.

Recommendations for Future Undertakings: Future research needs to address if physical workload would also put Latina farmworker adolescent and young adult women at risk for pesticide risk while working in U.S. agriculture. Nurses need to address the amount of work (hours per week and intensity) farmworkers engage and whether there are higher financial incentives for engaging in longer working hours. Knowing this can provide a holistic picture of the work and personal realities of Latino farmworkers in the U.S.

Occupational Safety Attitudes Among Latino Farmworker Adolescents in Arizona

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Background: The normalization of occupational hazards (NOH) in farmwork is an indicator of ingrained beliefs that agriculture is safe or equally safe as other industries (Becot et al., 2021). NOH among LFW-AYA may be attributed to childhood socialization processes can normalize occupational risks by implicitly accepting farmwork with its dangers and risks (Becot et al., 2021); danger is socially construct where there is a collective agreement of what constitutes dangerous, and the subsequent socialization to accept this danger (Shortall et al., 2019) and hesitancy to ask for safe occupational procedures for fear of losing their jobs (Arcury & Quant, 1998). NOH occurs at individual, environmental, and social levels with lethal and chronic consequences on health. Risk becomes part of day-to-day practice, seen frequently among workers that it becomes 'accepted,' specially if the initial consequences are not harmful (Irwin, 2020).

Methods: Participants included a total of N=99 (90% males, 55% from Mexico, ages 16 to 25 years old, M*age*= 20.80, *SD*=2.4) working in agriculture in Arizona. Interviewer-administered questionnaires were in Spanish and completion lasted approximately 45— 60 minutes. Participation was voluntary, and participants received a $30 monetary incentive. We also obtained an NIH Certificate of Confidentiality to secure participants' information. We conducted descriptive statistics and correlations in our analysis.

Assessment of Findings: N=99 Mexican descent Latino farmworker adolescents, ages 16 to 25, Mage = 20.80, 90% are males, 56% from Mexico, 44% from the U.S. A total of 62% of farmworkers are seasonal, 38% are migrant. In terms of safety attitude, participants answered in the following way to these four questions:

- No matter how hard you try to prevent them, serious injuries are going to occur on a farm: **70%** agree or strongly agree with this statement.
- Working under time pressure makes me less careful. **72%** agree or strongly agree with this statement.
- Safety precautions are important and necessary, even if they slow the job. **96%** agree or strongly agree with this statement.
- I am less likely to be injured doing farm work than other people my age doing the same work. **60%** agree or strongly agree with this statement.

Safety attitudes was not correlated to pesticide risk or heat-related illness. However, pesticide risk was correlated with heat-related illness ($r = .34$, $p < .01$).

Conclusions and Implications for Clinical or Educational Practice: Normalization of occupational hazards may be more prevalent among manual labor workers than workers in other industries. Greater attention needs to be given to gender differences as well as age differences to assess which group of farmworkers may be at a higher risk to normalize occupational hazards.

Recommendations for Future Undertakings: Health intakes need to incorporate patients' views about their work, especially if they are among the most dangerous industries in the country as it is the case of farm work.

Developing a Telenovela (Soap Opera) to Improve Self-Management Among Latinos with HIV

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Purposes/Aims: To develop a culturally tailored telenovela (soap opera) for HIV self-management among Latinos living with HIV (LWH).

Rationale/Conceptual Basis/Background: As advances in treatment have transformed HIV from an acute to a chronic disease and people are living longer with HIV, effective HIV self-management interventions are essential. LWH need to self-manage their course of treatment, including maintaining ART adherence, physical health, psychosocial functioning, and daily adaptations to living with a stigmatized chronic illness. An identified gap in LWH care is the need for culturally adapted interventions to improve HIV self-management. A culturally tailored telenovela (soap opera) for HIV self-management is one strategy to fill this gap. Telenovelas are appealing and familiar to Latinos and have effectively reduced risky sexual behaviors among Latinos in South Florida and California. However, to our knowledge, there are no existing telenovelas that promote HIV self-management among LWH.

Methods: This study employs basic and formative research informed by the social cognitive theory (SCT), narrative engagement theory (NET), and research on emotional responses as action-guiding intervention delivery mechanisms. Thirty-two Spanish speaking aged ≥ 18 in Denver, CO, will be recruited. Telenovela vignettes will be co-created in Spanish in collaboration with a CAB (*n=8*), an expert panel (research team and consultant), and a telenovela director/producer. Contextual and cultural aspects will be incorporated into the telenovela stories. Then, we will explore the acceptability of the telenovela vignettes and assess strategies to effectively deliver the telenovela to target participants using focus groups conducted with LWH (*n*=24). Professional actors will video-perform the vignettes that will be presented to LWH. Additionally, participants will be characterized based on their demographics and health history and will complete questionnaires assessing acceptability and modality. Descriptive statistics and conventional content analysis will be used for the quantitative and qualitative data, respectively. This study is a partnership between the University of Colorado College of Nursing and the Colorado Health Network (CHN).

Assessment of Findings/Outcomes Achieved: Data collection is currently in progress. After conducting the study activities, a culturally relevant HIV self-management telenovela for LWH will be produced and filmed in Spanish based on the assertion that LWH will identify with the telenovela content in a way that increases attention and comprehension.

Conclusions/Implications: Upon conclusion of this study, we will have a filmed telenovela for HIV self-management among LWH. The study will help to improve the self-management behaviors of LWH by co-creating an easily accessible, culturally tailored, and linguistically appropriate HIV self-management educational tool. This study has the potential for major national public health significance, including the potential to impact HIV self-management and a wide array of health outcomes in this at-risk yet understudied population. By tailoring this telenovela to LWH needs, we will contribute to reducing barriers to adverse health outcomes related to HIV self-management and secondary HIV preventive outcomes. Based on these findings, we will be well-positioned to lead future studies to test the feasibility and acceptability of the telenovela for HIV self-management.

SELF CARE

Final Semester Nursing Student Holistic Wellness

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Student wellness is essential to long-term nursing student and nurse success. Nurses who form habits of successful wellness strategies as students will carry those strategies forward and become healthy nurses in practice. The purpose of the study is to identify facilitators and barriers and describe levels of student wellness among final-semester nursing students. There is no standard instrument for measuring student holistic wellness among nursing students. Students completing their final semester in nursing have specific needs for support as they finish their last semester before transitioning into their first professional nursing role. The first specific aim of the study is to describe the domains of wellness in total and across six wellness domains. The study’s second aim is to identify facilitators and barriers to student wellness among final-semester nursing students. The final aim of the study is to explore the relationships between online and in-person demographic characteristics and wellness among final-semester nursing students. A convergent mixed-method survey is set up using the SHAWS scale for holistic wellness and open-ended interview questions to facilitate the purpose of the study. The data collection and analysis will be completed during this presentation.

The results of this study will allow faculty, staff, and advisors to support final-semester nursing students in their holistic wellness needs. Students supported in all aspects of their wellness are more likely to be successful in and out of the classroom.

Funding: Emergency Nurses Association Foundation Dissertation Grant

Mobile Wellness Wednesday to Reduce Stress Among Healthcare Workers

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Purposes/Aims: The purpose of this evidence-based wellness initiative is to reduce stress among healthcare workers in a veteran hospital.

Rationale/Background: Healthcare workers represent one of the most affected groups by the adverse effects of the COVID-19 pandemic. Research has shown higher levels of stress, anxiety, depression, and burnout among healthcare workers during and after the pandemic. These findings are alarming as professional burnout and mental health issues among healthcare workers were already at all time high prior to the pandemic. Solutions that provide psychological support to healthcare are needed now more than ever. Healing touch, aroma therapy and other modalities have been supported in the literature to reduce stress levels and improve well-being among healthcare workers.

Brief Description of the Undertaking/Best Practice: The Johns Hopkins Evidence-based Practice (EBP) Model served as a guide throughout the implementation process. The interprofessional EBP team collaborated with the hospital Whole Health Program and conducted an 8-week pilot project called the "Mobile Wellness Wednesday", creating an opportunity every Wednesday for healthcare workers to avail 20-30 minutes (group or individual sessions, respectively) of healing touch and aroma therapy performed by nurses who are certified Healing Touch practitioners. This mobile wellness initiative delivered the wellness sessions close to patient care areas or nursing units for ease of access to increase utilization among staff. Empty conference or meeting rooms with close proximity to the aforementioned areas were converted into makeshift Healing Touch or Zen rooms. Electronic flyers for Mobile Wellness Wednesday were sent throughout the healthcare system email distribution list and public affairs for distribution. A website was developed for staff to schedule their wellness sessions. To measure the impact of the wellness interventions, we obtained the participants heart rate, blood pressure, and perceived stress level using the Visual Analog Scale for Stress (VASS) before and immediately after the wellness sessions.

Assessment of Findings/Outcomes Achieved: Descriptive statistics and paired t-test were used to determine the effect of healing touch and aroma therapy pre and post sessions. Fifty-four healthcare workers from different healthcare groups signed up for the wellness sessions. The majority of the participants were females. There was a significant reduction in systolic blood pressure (p = .008), heart rate (p = <.001) and perceived stress (p = <.001) among participants. Qualitative feedback was also obtained with participants stating, "*This was very relaxing, thank you!*" and "*I can feel my stress went away*".

Conclusions: The pilot project demonstrated that our wellness initiative showed significant reductions in participants' systolic blood pressure, heart rate, perceived stress, and garnered positive feedback. Currently, the Mobile Wellness Wednesday program has been fully implemented throughout the healthcare system for dayshift workers and will be extended to the night shift staff. With leadership support, a night shift nurse who is also a healing touch practitioner will be given protected time to deliver healing touch and aroma therapy sessions every Wednesday for night shift workers.

Use of Emotional Freedom Technique (EFT) for Stress Reduction in Nursing Students

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Background: Chronic stress has adverse effects, causing physiological and psychological disorders and diseases, and can lead to maladaptive behaviors. College-aged adults, ages 18-23, report higher stress levels than all other age groups. High stress levels have been shown to impact academic success negatively. Current forms of mental health prevention on college campuses are effective, but cost and time are reported as barriers to students seeking mental health help. Emotional Freedom Technique (EFT) is a cost-effective, evidenced-based technique effective across various populations and illnesses and can be performed independently.

Purpose: This project aims to examine the effect of EFT on stress in nursing students during their first semester of nursing school.

Methods: A two-phase quality improvement project utilizing a quasi-experimental pre post design will be conducted at a small private university in the Pacific Northwest. Convenience sampling will be utilized to recruit and enroll participants entering their first semester of nursing school. Phase 1will consist of a 30-minute presentation of the details of the project, stress and its adverse effects on health and academics, and the EFT intervention. For phase 2, participants will be invited to attend at least two trained facilitator-led EFT sessions over a nine week period. The Subjective Units of Distress scale (SUDs) and the Perceived Stress Scale-10 will be utilized to assess stress and distress levels pre and post intervention. Participant demographic data, feasibility and reliability self-reported data will also be collected. Data collection will be conducted between September and November of 2023.

Results: Descriptive and inferential statistical analysis are planned to be completed by February 2024 utilizing SPSS software.

Implications: The results from this project may provide support for the use of EFT as a non-pharmacological treatment strategy for college students experiencing stress.

Impact of Self-Care and Wellness Models on Nurse Retention

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The global healthcare industry has been grappling with a persistent challenge of nurse retention, which is closely linked to issues of burnout, stress, and job dissatisfaction. As healthcare systems evolve and patient demands increase, the well-being of nurses has become a critical concern. This study examines the impact of self-care and wellness models on nurse retention, shedding light on the potential efficacy of these interventions in addressing the multifaceted factors contributing to nurse turnover.

Drawing upon a comprehensive literature review, this research explores various self-care and wellness models implemented within healthcare settings. It investigates how these models encompass physical, emotional, psychological, and social dimensions of well-being, aiming to create a supportive environment that empowers nurses to prioritize their health. The study also delves into the mechanisms through which self-care practices positively influence job satisfaction, stress management, and overall work experience for nurses.

Utilizing a mixed-methods approach, the survey incorporates both qualitative interviews and quantitative survey tools to gather insights from nurse executives and interdisciplinary leaders across different healthcare facilities from an interdisciplinary Chief Nurse Advisory Board. By examining real-world experiences and perceptions, the survey evaluates the effectiveness of self-care and wellness programs in enhancing nurse retention rates. Factors such as access to resources, managerial support, and cultural acceptance of self-care practices are explored to provide a holistic understanding of the barriers and facilitators influencing the adoption of these models.

The findings of this survey contribute to a deeper comprehension of the relationship between self-care, wellness models, and nurse retention. The implications of the research extend beyond healthcare institutions, offering valuable insights for policymakers, administrators, and healthcare leaders to develop evidence-based strategies that prioritize the well-being of nursing professionals. Ultimately, the survey advocates for a paradigm shift towards a more comprehensive and proactive approach to nurse care, fostering a healthier, more sustainable work environment that positively impacts nurse retention and, consequently, patient outcomes.

Meditation, Perceived Stress and Academic Anxiety in Pre-Licensure Nursing Students

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Purpose: This study aims to assess the feasibility of meditation using the Calm app among pre-licensure nursing students and explore changes in perceived stress and academic anxiety.
Background: College can be stressful for students as they learn to manage intense classes and juggle work, school, and social life. A recent study of college students shows that over 45% reported "more than average" stress levels. Nursing students have the additional task of learning how to care for people and learn disease processes in a condensed time. Nursing students are under significant stress because of the stress of being responsible for tasks and care of a person's life. Curricula of nursing programs are unique as they have a didactic and clinical component. Nursing students are responsible for learning the material; however, they also must be able to perform the skill and connect the pieces in the clinical setting. Nursing school is a high-stakes environment, which leads to further stress and pressure. The student has to excel in academia and practical skills to complete the program successfully. According to Lindsay and Creswell's Monitor and Acceptance Theory, monitoring one's feelings and emotions increases concentration and acceptance of experiences, which leads to decreased stress and anxiety. Prior research with pre-licensure nursing students indicates that meditation improves emotional regulation, stress reduction, concentration, and even autonomic nervous system regulation.
Methods: Design: A pre-post intervention study. **Sample and Setting:** Pre-licensure students (N=30) at a group of community colleges in metropolitan Phoenix, Arizona. **Measures and Procedures:** Feasibility measures will include study recruitment and retention, as well as intervention acceptability (AIM), appropriateness (IAM), and feasibility (FIM) assessed post-intervention (range=4-low to 20-high). Participants will complete Cohen's Perceived Stress Scale and Cassady's Academic Anxiety Scale-pre and post-intervention to explore changes in perceived stress and academic anxiety. **Intervention:** Participants will be asked to download the Calm app on their smartphone after enrollment. They will be asked to follow the guided meditation on the app for 10 minutes three times per week for four weeks. **Analysis Plan:** Frequencies, percentages, 95% confidence intervals, and mean±SE for AIM, IAM, and FIM will be calculated. Mean changes along with the 95% confidence intervals will be calculated to explore changes in perceived stress and academic anxiety.
Anticipated Results: Although pending, the anticipated results will demonstrate the feasibility of study recruitment and retention, as well as the acceptability, appropriateness, and feasibility of meditation using the Calm app among pre-licensure nursing students. Also, changes in perceived stress and academic anxiety are anticipated.
Implications and Future Research: Meditation has gained significant attention as a potential tool for reducing stress levels in pre-licensure nursing students. Implications and future research can significantly impact future nursing practice. Teaching pre-licensure nursing students to meditate early in their nursing career can teach positive long-term coping skills, which could help them become successful new graduate nurses. Findings from this study can encourage nursing programs to add a meditation component into their curriculum, which might lead to improved academic performance, enhanced clinical practice, and higher NCLEX pass rates.

SELF CARE

The Impact of Mindful Clinical Aromatherapy on ICU Nurses' Stress Experience

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Background: Frontline nursing roles primarily center around providing comprehensive care and support to individuals facing illness or injury. As a result, nurses often find themselves confronting human suffering and navigating emotionally draining situations while caring for the vulnerable. External factors such as the COVID-19 pandemic, administrative burdens, and unfavorable working conditions further exacerbate these challenges. Consequently, chronic stress experienced by nurses can culminate in occupational burnout if not effectively managed. Critical care nurses are susceptible to nurse burnout attributable to their complex clinical settings, high patient acuity, increasing responsibilities stemming from advancing technology, and a constant barrage of alarms. Such burnout can have deleterious impact on the health of nurses, the quality of patient care, and the broader healthcare landscape. While the prevalence of nurse burnout escalated during the pandemic, this issue may persist as a significant concern beyond the pandemic's resolution. In response, national organizations recognized that enhancing caregivers' well-being and mental health is pivotal to optimizing patient care. Healthcare leaders must, therefore, prioritize strategies aimed at mitigating nurse burnout.

Rationale: A needs assessment was conducted at a large academic hospital, with findings highlighting more than 60% of Neuroscience Intensive Care Unit (NSCU) nurses experience burnout. One significant gap identified was insufficient time allocated for self-care. Given that all nurses had previous training in providing aromatherapy and mindfulness to patients, key stakeholders recommended incorporating these practices into the nurses' self-care routine.

Purpose: This project aims to provide a unit-based mindfulness clinical aromatherapy wellness program to NSCU nurses and assess its impact on their self-reported stress experience.

Methods: Guided by the Johns Hopkins Evidence-Based Practice Model and Logic Model, this DNP scholarly project will implement an online program focused on mindful clinical aromatherapy. Participants will engage in daily 5-minute, mini-mindfulness sessions during their break time for four weeks utilizing the Smiling Mind© app while simultaneously using clinical aromatherapy by Ascents®. Designated peer champions will serve as support persons during project implementation. Self-reported stress and relaxation will be measured using the Perceived Stress Scale-10 and WHO-5, at baseline and the end of the intervention. Five additional Likert-scale questions will be administered post-intervention to assess program compliance and participant satisfaction. Additionally, an open-ended question will be included to gather feedback and evaluate potential areas for improvement. Demographic data will be summarized using descriptive statistics, and T-test will be utilized to analyze project outcomes.

Outcome: Results will be presented at the poster presentation. Expected outcomes include participant satisfaction, reduced stress levels, enhanced relaxation, improved well-being, and the acquisition of practical stress management skills.

Conclusions: The impact of this project will underscore the importance of providing frontline ICU nurses with the essential tools to mitigate burnout and enhance resilience and job satisfaction. Healthcare leaders must support wellness initiatives aimed at cultivating nurses' mental health, thereby optimizing their capacity to provide exceptional patient care.

SELF CARE

Feasibility of Tai Chi Easy™ Training for New Graduate Registered Nurses

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Background: Registered Nurses (RNs) comprise 59% of the healthcare workforce. Adverse workplace conditions, exposure to healthcare-related psychological trauma, strenuous workloads, and burnout due to the physical and emotional strain of caregiving have taken a heavy toll on nurses, prompting high turnover rates. Nurse turnover has a deleterious impact on patients, staff, and healthcare organizations, and new graduate RNs (NGNs) are at the highest risk of quitting, with 32.8% leaving their positions within the first year. Over the years, the problem of NGN turnover has inspired the study of numerous interventions, however the problem persists.

Tai Chi is a form of mind-body exercise known to have beneficial effects on health and well-being, and therefore may help NGNs cope with the stress, trauma, burnout, and somatic symptoms that may influence their intention to quit. Tai Chi Easy™ (TCE) is a simplified version of Tai Chi that is easy to learn, adaptable, and cost-effective. Despite these qualities, no studies using virtual TCE training as an evidence-based, and environmentally-respectful intervention were found in the published literature, highlighting an important gap in nursing knowledge.

Purpose/Aims: The aims of the proposed feasibility study are to 1) gain a deeper understanding of factors contributing to high turnover among NGNs, 2) determine if virtual, asynchronous TCE training is a feasible, acceptable, safe, and an appropriate self-care intervention for NGNs, and 3) explore whether changes in stress, transition shock, posttraumatic stress symptoms, burnout, and somatic symptoms can occur after participation in a six-week virtual asynchronous TCE behavioral training intervention.

Approach: The theoretical underpinnings for this study are Duchscher’s Transition Shock Theory, Foli’s Middle Range Theory of Nurses’ Psychological Trauma, Yin-Yang Theory, and psychoneuroimmunology dynamics.

Using a pre-post intervention study design, a purposive sample of 40 new-graduate RNs ages 20-30 who are within six months of starting their first RN job will be recruited to participate in two hour-long virtual TCE classes each week, plus 10 minutes of daily independent practice four other days for six weeks. Questionnaires will be completed via RedCap pre-and post-intervention, with weekly self-reports of adherence, satisfaction, and safety.

Measures include the Adverse Childhood Experiences Questionnaire, the PTSD Checklist for DSM-V, the Life Events Checklist for DSM-5, a modified version of the Nurses’ Intention to Quit Scale, Maslach Burnout Inventory, and the Somatic Symptom Questionnaire.

Feasibility will be determined using recruitment and retention data, as well as the Acceptability of Intervention Measure, the Intervention Appropriateness Measure, and the Feasibility of Intervention Measure.

Descriptive statistics and paired t-tests will be used to describe the sample and recruitment/retention rates, and changes in symptom measures respectively.

Outcomes: Data Collection is in Progress.

Conclusion: The results of this study have important implications for academic and clinical settings. Incorporating mind-body interventions as part of the transition to professional practice may help mitigate symptoms of stress, burnout, somatic symptoms, and reduce intention to quit in this high-risk group. Findings from this study will guide future larger-scale research efforts.

Adverse Childhood Experiences and Burnout Among Healthcare Professionals in Oregon

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Purposes/Aims: This research aims to investigate the potential correlation between Adverse Childhood Experience (ACE) scores and the levels of burnout among healthcare professionals. By understanding this relationship, we hope to shed light on the multifaceted causes of burnout, thereby informing more holistic prevention and intervention strategies within the healthcare system.

Rationale/Background: Burnout, characterized by emotional exhaustion, reduced professional efficacy, and increased depersonalization, has become a pervasive challenge among healthcare professionals, impacting both patient care outcomes and professional satisfaction. Contemporary research and anecdotal evidence suggest that personal life experiences, notably traumatic childhood events encapsulated by ACE scores, can play a significant role in one's susceptibility to burnout. By examining these intricacies, we can pave the way for more personalized, trauma-informed interventions for professionals at risk.

Methods: This prospective cohort study in Oregon will assess burnout, compassion satisfaction, compassion fatigue, and childhood trauma among healthcare professionals. Using Qualtrics, an online survey comprising demographic questions, the Professional Quality of Life, and Adverse Childhood Experiences measures was administered. We targeted CNAs, LPNs, RNs, dentists, physicians, PAs, podiatrists, LaCs, DPMs, and APRNs through convenience sampling. Descriptive statistics (means, proportions, etc.) will be used to understand the study population's demographics. Multiple linear regression will explore the correlation between trauma history and burnout levels.

Assessment of Findings/Outcomes Achieved: While data collection is in progress, we hypothesize that trauma history will correlate with increased compassion fatigue and burnout. We anticipate that professionals with higher ACE scores will exhibit more pronounced emotional exhaustion and professional detachment than those with lower scores.

Conclusions/Implications: This study emphasizes the necessity of considering personal histories, particularly childhood traumas, when addressing professional burnout. Recognizing burnout's multifaceted nature, which often includes the shadows of past traumas, is vital. The results warrant a transition towards actionable strategies like early professional screenings, trauma-aware training, and fostering supportive workspaces. Our forward focus is on expanded data collection and analysis, enriched by qualitative insights. Future research should delve deeper into the longitudinal impact of childhood trauma on burnout and explore specialized therapeutic interventions for affected individuals.

Prevalence and Characteristics of on-Shift Napping Among Hospital-Based Nurses

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Background: More than half of the nursing workforce in the United States is employed in the hospital setting, where around-the-clock care is commonly provided over 12-hour shifts. Working nights and 12-hour shifts increases nursing fatigue which has been related to negative outcomes, including a higher risk for car accidents when driving home and worse quality of patient care provided. One promising strategy to mitigate fatigue is the allowance of a short on-shift nap. Professionals such as pilots and long-haul truck drivers have long embraced the need for fatigue mitigation strategies to promote safety and are therefore mandated to have a sleep opportunity after long work sessions. However, the nursing workforce does not have mandated nap policies governing work, nor is prevalence of on-shift napping well-described in field studies among acute care nurses.

Purpose: To determine the prevalence and characteristics of on-shift napping reported by acute care nurses.

Methods: A secondary analysis was performed of an observational study. In the parent study, frontline nurses free of chronic illnesses working exclusively 12-hourday or night shift on an adult intensive care unit at a large medical center in the Pacific Northwest were recruited. Consented nurses completed surveys in Research Electronic Data Capture (REDCAP) prior to protocol initiation and after each 12-hour shift worked during the study period. Nurses were asked to provide data over a 6-day period which reflected three, consecutive 12-hour shifts followed by three, consecutive days off work. Demographics and nap-related data during on-shift conditions were analyzed, including nurse responses to the valid and reliable Karolinska Sleepiness Scale (KSS) to quantify sleepiness on a scale of 1 (extremely alert) to 9 (fighting sleep) self-reported immediately following each 12-hour shift worked during the study period. Data were analyzed descriptively.

Results: A total of 19 nurses (n=8 day shift; n=11 night shift) had data available for analysis and reported 57 shifts. A total of n=3 participants (16%; n=2 night shift; n=1 day shift) reported taking a nap once on-shift during the study for an overall n=3 shifts (5%) reflecting a nap. All documented on-shift naps lasted 20 minutes. Average post-shift KSS score for the three shifts with naps were 7.0 versus 5.4 for all others. Both night nurses reported a nap on the third consecutive 12-hour shift while the day shift nurse reported a nap on the first of three consecutive 12-hour shifts.

Conclusion: In our study, nurses napped on-shift infrequently and reported the intervention in the context of high KSS scores. Further work with larger sample sizes is warranted to validate findings and prospectively test timing, duration, and impact of regular on-shift napping on fatigue-related patient and nursing outcomes.

Implications for Practice: Identifying the prevalence of nurses who take an on-shift nap is an important first step to mitigate risk for fatigue-related safety issues for nurses and patients. Both day and night nurses in our sample reported using the strategy and appeared to do so as a coping strategy to combat sleepiness.

Funding: Allen Foundation

Relationships between Dietary Intake and Alertness Among 12-Hour Shift Nurses

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Background: Acute care nurses are scheduled to work at all hours. Nurses working 12-hours versus a traditional 8-hour shift length report adverse sleep outcomes such as reduced alertness. Reduced alertness is linked to increased risk for serious safety concerns including errors in patient care delivery and car accidents when driving home from work. Evidence suggests that dietary practices may change under conditions of reduced alertness, including increased caloric intake, possibly as a way for the body to compensate. However, relationships between dietary intake and alertness among nurses working 12-hour shifts are unclear.

Purpose: To test associations between reported dietary intake and alertness among nurses when on-duty.

Methods: This is a secondary analysis of an observational study conducted from 2020 to 2021 among frontline, 12-hour shift nurses. Individuals were recruited from one of 10 hospitals within a large Catholic Health System in the Western United States. Interested, eligible nurses provided e-consent and were enrolled in the study. Participants were mailed a wrist actigraph and wore the device for 10 days to include 3 on-duty days. The actigraph calculates a cognitive alertness score on a 0–100-point scale where 80 or less indicates risk to alertness. Nurses completed electronic food diaries for each on-duty day using the ASA24 online website, which calculates dietary information including total daily caloric intake (kacl) and protein intake. Data from the ASA24 website can be converted to a healthy eating index (HEI) score, indicating overall diet quality. For example, using the HEI calculations, protein intake is scored on a 0 to 5 scale with a higher number indicating more and better-quality protein intake.

Results: A total of 71 on-duty observations were received from 38 unique nurse participants. On total of 19 on-duty days (26.8%), participant alertness scores fell below the threshold of 80. Participants reported significantly more caloric intake (m=2127.2 kcal) during on-duty days with low alertness scores compared to on-duty days with higher alertness scores (m=1737.0, p=0.02). Protein intake was significantly higher and better quality (m=4.84) during on-duty days with alertness scores below 80 compared to on-duty days with higher alertness scores (m=4.11, p=0.02).

Conclusion: In our sample, over a quarter of observed on-duty days reflected low nurse alertness scores, increasing risk for serious safety events. Lower alertness scores were significantly related to higher caloric intake from protein sources. Future studies supporting risk mitigation strategies are needed to preserve the health of the nurses and ensure nurses can deliver quality patient care, particularly when working extended, 12-hour shifts.

Implications for Practice: Nurses may intuitively increase caloric intake during times of poor alertness at work. Nurses in our sample tended to eat increased protein, potentially as a way to counteract feelings of reduced alertness. This sample of nurses demonstrated an effort to make healthy food choices, which requires the support of the workplace to ensure healthy food choices are available. Future research should focus on which dietary components are ideal to consume to support increased alertness, especially for nurses working extended, 12-hour shifts.

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Circadian Rhythms of Individuals with Inflammatory Bowel Disease: Scoping Review

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Purpose: To identify the key concepts and measures related to the literature on circadian rhythms of individuals with inflammatory bowel disease (IBD).

Background: 3 million Americans have IBD, an incurable gastrointestinal illness that can impact sleep due to nocturnal bowel movements and abdominal pain. The circadian rhythm (CR) in humans maintains homeostasis in the body. CR disruptions and changes in the molecular underpinnings of the endogenous circadian clock can impact nighttime sleep and daytime sleepiness and, consequentially, health outcomes. Individuals with IBD commonly experience poor sleep quality and sleep disturbances in both active and inactive disease phases, which have been linked to a higher risk of relapse. However, there is a lack of understanding of the impact of CR on IBD health outcomes despite its close tie to sleep.

Methods: In May 2023, literature on CR of humans with IBD was searched in Pubmed, CINHL, and PsycInfo using search terms related to CR and IBD with limits to articles in English with full text. The search produced 101 articles. After duplicates were removed, 87 studies were screened. Papers with solely non-human subjects (i.e., animal models) were excluded. Two reviewers screened titles with abstracts and then the full text. A total of 18 articles remained after screening, and the data was extracted. Covidence software was used to screen and organize the literature. The Joanna Briggs Institute (JBI) methodology for scoping reviews was used.

Findings: Of the 18 articles, the main concepts related to CR mentioned were CR genes (n=8), chronotype (n=7), rest-activity rhythms (n=3), and endogenous melatonin (n=2). Some papers covered multiple concepts. Sample sizes for IBD participants ranged from 4 to 2054. Only four studies described the education or employment of the sample. For studies that examine CR genes, specimen types include four using intestinal tissue, two using peripheral blood, and two using both tissue and peripheral blood. Among the six CR gene papers that included health controls (HC), all found a significant difference in CR gene expression levels or CR genotype frequencies between those with IBD and HC. Seven papers measured chronotype using questionnaires, and yielded mixed results in relation to IBD outcomes. The three studies examining rest-activity rhythms (RARs) used wrist actigraphs; two studies found significant relationships between RARs and IBD-related health outcomes. Two studies used serial saliva samples to examine dim light melatonin onset or melatonin rhythms.

Implications: There continues to be a limited understanding of the impact of CR on IBD health outcomes. Additionally, comparing studies is challenging due to varying measurement tools and sample differences. Future research that holistically examines CR in IBD should include evaluating social determinants of health and recruiting diverse populations.

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Sleep-Wake Cycles of Individuals with Inflammatory Bowel Disease

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Purpose: To examine nighttime sleep and circadian rhythm characteristics of individuals with inflammatory bowel disease

Background: Inflammatory bowel disease (IBD) is a chronic autoimmune disease of the gastrointestinal system. Approximately 3 million Americans have IBD. Gastrointestinal symptoms (e.g., nausea, abdominal pain) and extraintestinal symptoms (e.g., fatigue, joint pain) can impact sleep in those with IBD. Sleep is a critical activity for humans and can affect the immune and gastrointestinal systems. Many individuals with IBD report poor sleep quality as well as high rates of fatigue. Additionally, past IBD research found that persons with more aggressive IBD phenotypes have less inter-daily stability in rest-activity rhythms and are more likely to experience social jet lag, a form of circadian misalignment. Most IBD research on sleep has focused on nighttime sleep; however, overall lifestyle patterns and daytime activities can also impact sleep. Thus, examining nighttime sleep outcomes and circadian rhythm characteristics provides the foundation to understand the complexity of sleep-wake cycles in those with IBD to create holistic interventions.

Methods: Recruitment for adult IBD participants in Seattle, Washington began in May 2023. Data collection is in progress, and the recruitment goal is 24 participants. Participants are eligible if they are between the ages of 18-55, diagnosed with IBD, and do not have a known sleep disorder. After informed consent, participants are sent electronic surveys on REDCap and wear a wrist actigraph for ten days while completing daily sleep diaries. The electronic surveys include sleep measures (e.g., Pittsburgh Sleep Quality Index (PSQI), Patient-Reported Outcomes Measurement Information System (PROMIS) 6-item sleep disturbance scale). In the PROMIS 6a sleep disturbance scale, a higher T score indicates greater sleep disturbance when compared to that of the US general population. Chronotype, one's sleep/wake time preference, was measured using the morning eveningness questionnaire (MEQ). Actigraph data was scored using Actiware 6.3 software (Philips Respironics). R software was used for descriptive statistics for survey data. Analysis for social jet lag and rest-activity rhythm characteristics will be conducted when recruitment is completed.

Interim Findings: Nine IBD participants (Crohn's disease = 7, ulcerative colitis = 2) completed the baseline survey. The mean age of the sample was 38.4 years; the sex distribution was 4 females and 5 males, and 66.7% were married. Most participants (88.9%, n = 8) had poor sleep quality based on a PSQI >5. The mean T score was 55.5 for PROMIS sleep disturbance. Based on the MEQ, more participants had a morning type chronotype (n = 4) compared to evening type (n = 2) or intermediate (n = 3). Eight participants completed wearing a wrist actigraph for ten days. Based on the actigraphy data, there was an average sleep duration of 439.1 minutes (SD: 112.1), an average sleep efficiency of 80.8%, and an average of 55.6 minutes (SD: 28.4) of wake after sleep onset (WASO).

Implications: Information from this study examining both nighttime sleep and the circadian rhythm can assist in designing interventions tailored to those with IBD. This work is in progress.

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Exploring the Effects of Taking a Nap Among Adults with IBD: A Secondary Data Analysis.

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Background and Purpose: Inflammatory Bowel Disease (IBD) is a chronic inflammatory condition affecting the gastrointestinal tract, which includes Crohn’s Disease and Ulcerative Colitis. The prevalence of IBD among adults in the United States is estimated to be 3.1 million. Common symptoms of IBD can be diarrhea, abdominal pain, nausea, vomiting, and constipation. These unpleasant symptoms are associated with non-gastrointestinal symptoms such as fatigue and sleep disturbances. Previous studies had reported that IBD symptoms are also linked with psychological symptoms such as anxiety and depression. However, limited study explores the effects of taking naps among adults with IBD. The purpose of the study was (1) To describe the demographic characteristics of adults with IBD; (2) To compare the symptoms between adults with IBD who take naps and those who do not.

Methods: We conducted a secondary data analysis of an IBD sleep study. Participants ages 18-55 years old were recruited to complete questionnaires and wear a wrist-warn actigraphy for 10 days. Participants completed daily questionnaires regarding naps. We analyzed the self-reported symptoms and napping habits of 27 adults diagnosed with IBD. Our analysis employed t-tests to compare symptoms between individuals who reported napping and those who did not.

Results: 27 participants (mean age 33.1 years, 59.2% female, 74.1% Crohn’s disease) were included after excluding missing data. Our sample included 15 individuals who reported napping (mean age 33.0 years, 53.3% female, 66.7% Crohn’s disease, 53.3% inactive disease) and 12 individuals who did not report napping (n=12, mean age 33.4 years, 66.7% female, 83.3% Crohn’s disease, 75% inactive disease). There was no significant difference in symptom severity between the two groups (those who napped compared to those who did not nap) across a range of symptoms including fatigue (p= 0.78), anxiety (p=0.85), depression (p= 0.32). Also, there is no significant difference in sleep measures including: sleep disturbance (p=0.73), sleep-related impairment (p=0.91), PSQI Total (p=0.90).

Conclusions and Implications: In conclusion, our results suggest that taking naps in this population does not appear to have a significant impact on self-reported symptoms of anxiety, depression, fatigue, sleep disruption, sleep-related impairment, and PSQI Total. The findings suggest that napping may not significantly influence the symptom experience in adults with IBD. Further research is required to explore other potential moderating factors that might impact symptom severity in this population.

Funding: The parent study included in this secondary data analysis was funded by University of Washington School of Nursing. Kendra Kamp is supported by the National Institute of Nursing Research (K23 NR020044)

Unhealthy Coping in Sleep-Deprived Individuals: A Concept Analysis

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Aim: To examine the concept of unhealthy coping in sleep-deprived individuals to better understand the phenomena by addressing its attributes, antecedents, and consequences.

Background: Insufficient sleep is experienced by 33% of American adults. Sleep deprivation can be a short or long-term condition in which an individual does not get enough sleep each night, which increases the risk of health problems such as obesity, heart disease, stroke, dementia, high-risk behaviors, and drowsy-related accidents. The Allostatic Load framework posits that lack of sleep can serve as both an outcome and a stress trigger. Research shows that individuals who experience insufficient sleep tend to engage in unhealthy coping, seeking to alleviate or reduce stress but ultimately exacerbating the problem or interfering with the expected outcomes (e.g., substance abuse, self harm, rumination, social withdrawal, overeating, among others).

Methods: Rodgers' evolutionary concept analysis method was followed. An electronic literature search in PubMed, CINAHL, and PsycINFO was conducted. In highly relevant articles, additional citation mining was also performed. Time restrictions were not considered during the search, and only articles written in English were included regardless of the geographical region where the research was conducted. Thematic analysis was used to determine the defining attributes, antecedents, and consequences of the concept of interest.

Findings: The antecedents preceding the concept were: a. Self-reported or diagnosed sleep deprivation, b. Appraisal of the stressor, c. Previous coping style and life experience. The following attributes were identified: a. Unhealthy Coping could act as an outcome and trigger of sleep deprivation. b. Conscious, voluntary, and context-based behaviors or thoughts c. Counterproductive strategies. Finally, three consequences were outlined: a. Sleep deficiency, b. Psychophysiological morbidity b. Impaired quality of life.

Based on the attributes, antecedents, and consequences identified above, the following definition of Unhealthy Coping in Sleep-Deprived Individuals is proposed: "Unhealthy Coping in Sleep-Deprived Individuals could act as an outcome or a trigger related to sleep deprivation. It is characterized by voluntary cognitions and behaviors to alleviate stress but leads to adverse outcomes for the individual. It can result from a prolonged lack of sleep and the intersection of a stressful situation and previous coping strategies. Unhealthy Coping in Sleep-Deprived individuals can have adverse consequences such as sleep deficiency, development of stress-related illnesses affecting mental and physical well-being, and a poor perception of overall quality of life".

Conclusion: Potential avenues for consideration are suggested to enhance comprehension of this concept. Regarding future research, it is necessary to conduct comprehensive studies to advance our understanding of the potential bi-directional relationship between unhealthy coping and sleep deprivation. In terms of clinical implications, comprehending these mechanisms is vital for establishing effective healthcare provider-patient relationships and delivering optimal patient care. Equipping patients and caregivers with suitable coping skills can markedly improve their perception of stressors and the selection of coping strategies to address psychological distress.

The Effect of Noise Reduction on Sleep Quality and Patient Satisfaction

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Purpose: This evidence-based practice (EBP) project aimed to identify the effect of noise reduction interventions on patients' sleep quality and patient satisfaction with noise levels, and to access the knowledge of noise issue among Definitive Step-down Unit (DSU) staff. Noise reduction will improve patients' healing process, sleep quality, and patient satisfaction score. The project will be guided by the following clinical practice question: "In acute care patients, does the implementation of noise reduction interventions, compared to current practice, affect patients' sleep quality and patient satisfaction with noise level?"

Methods: A descriptive, before-and-after design was used to collect and analyze quantitative data. The data collection instruments included the Patient Survey on Noise during Hospital Stay, a Noise Survey, and Training Effectiveness Questions for Post-course Evaluations. The study was conducted at Providence St. Joseph Hospital in Orange, California, on a Definitive Step-down Unit (DSU). The selection process involved recruiting 52 participants who met specific inclusion and exclusion criteria. These criteria were carefully established to ensure the relevance and appropriateness of the sample for the study. Descriptive statistics will be given as mean ± standard deviation or median with minimum and maximum for continuous variables and numbers with percentages for categorical variables. Item-by-item analyses will be used to understand better the staff and patient perception of noise in DSU and if there are any changes after implementing the noise reduction project.

Results: Post implementation patient survey noted that closing patient door, dimming the light and care kit were the most effective strategies in noise reduction and patient satisfaction. Findings also revealed a significant improvement in patient satisfaction with sleep quality and staff's knowledge about noise's effects in DSU.

Discussion: Most patients identified various obstacles hindering their ability to achieve restful sleep and adequate rest. These barriers encompassed a wide range of factors, including noise levels, disruptions to medical care, physical discomfort, and environmental conditions. Despite these challenges, staff members positively assessed the intervention's acceptability, indicating a willingness to embrace and support its implementation. This positive evaluation from healthcare staff members is an encouraging sign of the potential success and sustainability of noise reduction strategies in the hospital setting.

Conclusions: To improve patient sleep and rest in healthcare settings, future research endeavors should explore additional avenues, potentially incorporating observational data to understand better the factors impacting sleep quality. Specifically, nurses play a crucial role in this endeavor, and their efforts should be directed toward reducing stimuli that can disrupt sleep patterns. This may involve enhancements in alarm management practices, concerted efforts to mitigate environmental noise levels, and implementing care bundling strategies. By focusing on these areas, nurses can contribute significantly to creating a more conducive and therapeutic environment for patients, ultimately enhancing the quality of sleep and rest experienced during hospital stays.

Cancer-Related Cognitive Impairment and Quality of Life in Breast Cancer Survivors

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Background: Cancer-related Cognitive Impairment (CRCI) is a common concern reported by cancer survivors. However, there are few comprehensive reviews on the impact of CRCI on the quality of life (QoL) of breast cancer (BC) survivors. The purpose of this scoping review is to provide a synthesized summary of the evidence and identify gaps in our knowledge of the QoL in BC Survivors living with CRCI.

Methods: An electronic search was performed on the PubMed, CINAHL, PsycINFO databases. We identified published literature from January 2013 to October 2023. A total of 360 abstracts were screened, and 14 met the inclusion criteria. Eligibility was determined by two independent researchers.

Results: A total of 13 studies employed quantitative designs, and 1 utilized qualitative designs. As for CRCI, 8 studies measured subjective CRCI, and 6 studies assessed both subjective and objective CRCI. The commonly used assessment tools for CRCI were Functional Assessment of Cancer Therapy - Cognitive Function (FACT-Cog) (n=7). The commonly used assessment tools for QoL were the European Organization for Research and Treatment of Cancer Quality of Life Core Questionnaire 30 (EORTC-QLQ-C30) (n=3), subscale QoL of Functional Assessment of Cancer Therapy - Cognitive Function (FACT-Cog) (n=3). Subjective cognitive impairment was reported to be consistently associated with reduced quality of life in BC survivors. Additionally, one study demonstrated that a woman's perception of cognitive deficits significantly influenced her perception of quality of life.

Conclusions/ Implications: Further research is needed to explore QoL among BC survivors living with CRCI. Current literature lacks qualitative or mixed-methods studies, which could offer a more profound understanding of the experiences of these survivors, especially those who may be affected by health inequalities. Long-term follow-up studies are also required to track progressive changes in QoL and cognitive function, as well as to investigate how cognitive impairment influences specific dimensions of QoL. Furthermore, a more comprehensive comparison between subjective and objective cognitive function assessments is needed to elucidate their influences on QoL. Lastly, the development of effective intervention strategies should also be a major focus of future studies to better address the impact of CRCI on the QoL of breast cancer survivors.

Addressing GAPs in Menopausal (MENOGAP) Healthcare for Latina/Hispanic Women

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Purpose: This project aims to adapt the existing MENOGAP manual for delivery by community health workers (CHWs) in group settings to expand its reach among Hispanic/Latina women while aligning with Hispanic/Latinx cultural values.

Background: By 2050, the United States is projected to be home to approximately 128 million Hispanic/Latinx individuals, with Latinas constituting a quarter of the female population. Research on healthcare access disparities highlights Hispanic/Latinx communities as among the most marginalized. In the context of midlife women's health, Latinas experience an earlier onset of menopause and endure more protracted symptoms compared to their white counterparts. Latinas also report a higher prevalence of urinary incontinence, vaginal dryness, increased heart rate, and heightened perceived stress. Recent studies suggest that some of these health disparities among Latinas stem from structural racism within the US healthcare system.

Cardiovascular diseases (CVDs) remain the leading cause of mortality among American women, responsible for one in five female deaths. Alarmingly, awareness of heart disease as the primary cause of female mortality has declined, particularly among Hispanic women, who are at an elevated risk. Hispanic women typically develop CVD a decade earlier than non-Hispanic women. During the menopausal transition (MT), CVD risk escalates, coinciding with an increased prevalence of metabolic syndrome. Reduced estrogen levels during MT are associated with coronary artery narrowing. Despite substantial evidence of heightened CVD risk during MT, midlife Hispanic women remain underrepresented in CVD intervention studies. Furthermore, Hispanic midlife women confront increased symptom severity, including anxiety and depression, compared to their white counterparts.

Our team has developed a promising intervention, MENOGAP, which involves healthcare provider-led "doc talks" addressing symptoms, self-care, CVD prevention and education on women's risk factors, and evidence-based non/pharmacological interventions, including acupuncture therapy. Nevertheless, access to MENOGAP is hindered for some Latinas due to insufficient insurance coverage when delivered by two healthcare providers. CHWs offer an accessible and innovative solution to extend the reach of MENOGAP. CHWs are trusted community members and frontline public health workers, fostering health knowledge and self-sufficiency.

Methods: This project involves adapting the MENOGAP intervention into Latina.MENOGAP for delivery by CHWs, emphasizing cultural relevance and translating content into Spanish. Feasibility, acceptability, and health outcomes among Hispanic/Latinx women receiving Community MENOGAP will be assessed. Three groups, each consisting of N=12 Latinas, will receive Latina.MENOGAP, and metrics will include feasibility, acceptability, perceived stress (primary outcome), vasomotor severity, quality of life, and self-efficacy (secondary outcomes).

Assessment of Findings: We are currently in the process of adapting the MENOGAP manual, expecting results by Spring 2024.

Implications: The expected outcomes will yield preliminary data for a subsequent randomized controlled feasibility trial, assessing the capacity to deliver Latina.MENOGAP with fidelity in the broader Hispanic/Latinx community. Upon establishing feasibility and acceptability of this intervention, multisite efficacy, effectiveness, and implementation trials can follow. The successful accomplishment of the scientific objectives outlined in this application will position our team to develop and test a pioneering CHW-delivered intervention addressing health disparities among midlife Hispanic/Latinx women.

Funding: University of Utah 1U4U

Understanding Opioid Rehabilitation Needs for Young Adult Black Women Ages 18-30

***Jessica E. Draughon Moret**, PhD, RN, Betty Irene Moore School of Nursing, UC Davis, Sacramento, CA; **Shantel T. Porter**, M.Sc., BS, Betty Irene Moore School of Nursing, University of California, Davis, Sacramento, CA*

Purposes/Aims: The aim of this study was to explore Black women’s explanatory models of their opioid use, including their conceptions of addiction, views of the causes, ways of dealing with its consequences, how social context (e.g., family or the community) relates to their addiction trajectories, and how they decided to engage in rehabilitation.

Background: In 2021, 9.2 million people reported past-year opioid misuse. Increased public health efforts have aimed to reduce opioid use disorders since 2015, yet many people are still not receiving appropriate rehabilitation care. More importantly, in 2021, roughly 1.2 million Blacks reported opioid use. Compared to all other populations, Blacks had the highest mortality rate involving the use of heroin, fentanyl, or fentanyl analogs. Despite increased rates of opioid use among Blacks, and increased attention and treatment for people with opioid use disorders, Black women remain understudied. National surveillance provides opioid use pattern rates but data on the intersection of gender, race, and geography are missing. Thus, there is a gap in knowledge about Black women and their experiences with opioid use rehabilitation services.

Methods: This social constructivist grounded theory study interviewed Black women ages 18 and older with opioid use rehabilitation experiences, within the United States. Researchers using the social constructivist grounded theory approach often engage in intensive interviewing, constant comparison, theoretical sampling, memo writing, and substantive theory generation. The interview guide was developed with open-ended questions centered around the following a-priori thematic domains (a) experiences of Black women’s opioid addiction experiences, (b) coping with addiction consequences, (c) successors to and barriers to rehabilitation, and (e) how race, gender, and social class relate to Black women’s accounts of their recovery experiences. Participants were recruited via a University hosted recruitment site. Participants (N=30) completed in-depth individual interviews via Zoom between January 2023 and April 2023. Audio was transcribed verbatim by a transcription service. Analysis began with open coding of each interview transcript as it became available. Open coding was followed by axial coding. The data is currently still under analysis. All study procedures were approved by the University IRB.

Results: Preliminary results will be presented. Black women aged 18-30 years responded to the study call. Women report oral opioid use, heroin use, and multi-use histories. Participants acknowledged the emotional and physical traumas which influenced initiating use, and multiple overlapping experiences of societal backlash from within Black communities. Participants described backlash for opioid use, saying “we don’t do those kind of drugs”; and backlash for seeking help “Blacks don’t need that kind of help”; and backlash within rehab programs (“Blacks are supposed to be strong, so you don’t need help. ”

Implications for Translation to Practice/Further Research: Black women might be more attracted to complete rehab if the rehab programs focus on fostering community and connections versus invalidating Black women’s experiences. The societal message and internalized *need to be a Strong Black Woman* are hurting Black women’s health behaviors and biasing the clinicians involved with substance use rehabilitation care.

WOMEN’S HEALTH

Core Outcome Sets for Acupuncture Trials in Women’s Health across the Lifespan

***Wen Tu**, College of Nursing, University of Utah, Salt Lake City, UT; **Kate Levett**, School of Medicine, University of Notre Dame Australia, Sydney, SA, Australia; **Claudia Citkovitz**, Department of Rehabilitation Medicine, NYU Medical School, New York City, NY; **Kathleen Lumiere**, Bastyr University, Seattle, WA; **Sandro Graca**, School of Health and Society, Faculty of Education, Health and Wellbeing, University of Wolverhampton, Wolverhampton City, Telford and Walsall, United Kingdom; **Belinda (Beau) Anderson**, PhD, LAc, College of Health Professions, Pace University, Pleasantville, NY; **Lisa Conboy**, Harvard Medical School, Cambridge, MA; **Rosa Schnyer**, School of Nursing, University of Texas, Austin, TX; **Elisabeth Osgood-Campbell**, MA, EdM, College of Nursing, University of Utah, Salt Lake City, UT; **Lisa Taylor-Swanson**, PhD, MAcOM, LAc, College of Nursing, University of Utah, Salt Lake City, UT*

Purpose: This study aims to develop a standardized core outcome set (COS) of measures of women’s health across the lifespan, including investigations of menstruation, pregnancy, labor, postpartum, infertility, and menopause. Standardized COSs enable researchers and healthcare practitioners to strengthen the base of evidence for acupuncture trials, and subsequently inform healthcare practice to support women’s health and better address significant challenges faced by women.

Background: Clinical trial and systematic review evidence for acupuncture interventions indicate the capacity to significantly improve women’s health but is also severely limited by methodological quality, small sample sizes, and heterogeneous outcome measures with variable relevance to whole-person health. A COS comprises a standardized set of outcomes that can be measured and reported routinely for clinical trials in a specific area of healthcare and have been developed in consultation with stakeholders, including consumers. COSs have the capacity to increase consistency across trials, maximizing the contribution of meaningful data to systematic review-level evidence. The outcomes are more likely to be relevant to consumers and practitioners, improving research quality and reducing bias.

Methods: Using a consensus building co-design method, including consumer representation and Delphi surveys, this study aims to establish COSs for specific clinical issues by engaging experts in rounds of voting and discussion. In this project, a modified Delphi process was employed to establish consensus around the COSs to be included in clinical trials of acupuncture in women’s health. In May 2023, at the Society for Acupuncture Research’s meeting, eight acupuncture researchers and clinical experts proposed core measures based on reviews of the scientific literature on women’s health. Researchers and practitioners then provided suggestions for inclusion of outcomes based on their expertise during a workshop.

Assessment of Findings: We found distinct priorities in assessing COS for various aspects of women’s health. For the menstruation COS, self-reported outcomes such as pain scales, functional measures, mood-related assessments and patient experiences were essential. Important menopause outcomes included vasomotor symptoms, insomnia, and emotion regulation. Lab tests that evaluate micronutrients, vitamin D, and anemia were recommended for inclusion. In endocrine disorders, pain, quality of life, and inflammatory markers were central considerations, with Magnetic Resonance Imaging (MRI) favored over ultrasound. The pregnancy related COS prioritized lab indicators for conditions, social support and safety. Infertility and In Vitro Fertilization COS emphasized assessment of hormone levels, embryo quality, and ovulation rates and the addition of sperm parameters, egg tests, and family history. Labor and birth outcomes concentrated on induction and duration of labor, mode of birth, medical interventions, labor preparation and community support. In postpartum care, robust history tracking, trauma diagnosis, and body outcomes were key, along with depression and satisfaction measures. Additional considerations involved breast care, hemorrhoids, and urinary incontinence.

Implications: COSs can improve research quality, reduce bias, and ensure that outcomes align with the needs of patients and practitioners by including them in research processes. By standardizing core measures, COSs address significant challenges in women’s health, bridging the gap between research and practical application and ultimately enhancing the well-being of women.

Sex and Gender Differences in Atrial Fibrillation Symptoms and Quality of Life: A Review

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Purpose/Aims: The purpose of this critical review is to establish a framework, based on a socioecological model of health, that provides a lens for understanding the impact of both sex and gender differences in atrial fibrillation (AF) experiences. The aims are to provide a narrative summary of the literature on 1) differences in AF symptoms and quality of life (QOL) in women compared to men, and 2) biological (sex-based) and social (gender-based) factors associated with such differences.

Background: Atrial fibrillation is the most common cardiac arrhythmia and is often associated with tachycardia and unpleasant symptoms. Although AF can be asymptomatic, 60-90% of individuals with AF experience symptoms, most commonly palpitations, fatigue, and shortness of breath. Symptoms contribute to poor QOL, increased healthcare utilization, and are integral in AF treatment decisions. Women with AF endure higher symptom burden and lower QOL compared to men, yet the biological and social factors contributing to these differences remain largely unknown.

Methods: Guided by Bronfenbrenner's socioecological model of health, a critical literature review was conducted with search terms including "atrial fibrillation," "symptoms," "quality of life," "gender," and "sex." Relevant articles published through April 2023 were identified through PubMed, EMBASE, CINAHL, and manual searches of reference lists. Full-text, published, peer-reviewed, English-language articles were included in the review.

Findings:

Symptom and QOL differences. Despite a lower incidence of AF compared to men, women report more frequent and severe AF symptoms and lower QOL. Women are more likely to report palpitations, lightheadedness, shortness of breath, and chest discomfort or to present with atypical symptoms (fatigue, weakness). Asymptomatic AF occurs more predominantly in men. Women with AF have lower QOL and lower physical health QOL.

Biological and social differences. None of the identified studies examined factors associated with AF symptoms and QOL by biological sex or gender. However, this review identified biological and social differences critical to understanding observed AF symptom and QOL disparities. Women with AF are older, have more comorbidities, higher resting heart rate, and are more likely to have left atrial enlargement, hypertension, obesity, depression, and anxiety. Women report lower confidence in their ability to control their AF. Qualitative studies describe how others (support system, healthcare providers) influence differences in women and men's evaluation of symptoms and subsequent responses. Women are less likely than men to undergo rhythm control treatments shown to improve symptoms, but it is unknown if this disparity is driven by provider selection or patient decision-making.

Conclusion: This review revealed evidence of sex and gender differences in AF symptom and clinical profiles, illness perceptions, evaluation, and response. These findings, integrated from across multiple levels of the socioecological model of health, informed the development of the AF Symptoms and QOL framework. A critical gap remains as to why sex/gender differences in AF symptoms and QOL exist, with a profound lack of evidence linking biological and social factors to such differences. Future research is needed to design nursing interventions that bridge the sex/gender gap and maximize improvement in symptoms and QOL in women with AF.

Funding: T32 Omics and Symptom Science Training Program (T32 NR016913)

RESEARCH & INFORMATION EXCHANGE POSTERS

The Research & Information Exchange (R&IE) includes posters by faculty, students, and nurses in clinical practice. These posters have been submitted by WIN member organizations and have not been peer-reviewed by WIN.

ARIZONA STATE UNIVERSITY
EDSON COLLEGE OF NURSING AND HEALTH INNOVATION

Social Safety for Black Mothers: A Concept Analysis
Kadeeja Murrell

Using the Confluence Model to Explain Coercive Condom Use Resistance
Weiqi Chen, Julia Hammett, Mitchell Kirwan, Kelly Cue Davis

High-Fidelity Healthcare Simulation: Expired Blood-Perfused Cadavers
Kayla Gray, Winnie Feng, Suhail Zeineddin, Peter Wu, James Mankin,
Kristina Chapple, Scott Echols, Hahn Soe-Lin, Jordan Weinberg

A Naturalistic Exploration of Somnus Support Among Bereaved Dementia Caregivers
Yingyan Huang, Julie Fleury, Zachary G. Baker

Creating a Toolkit for University Faculty Usage in Discussing AOD Topics with Students
Sarah Sarandos

School Based Substance Use Prevention Interventions: A Systematic Review
Sarah Portle, Angel Algarin, Kelly Cue Davis

Healthcare Support Approaches for Bereaved Dementia Family Caregivers
Gemma O'Donnell

Parental Expectations in Adolescence and Healthful Lifestyles in Adulthood
Felipe Gonzalez Castro, Fiorella L. Carlos Chavez, Robert Carbajal

Development of a Pre-Stem Cell Transplant Geriatric Assessment Pilot Study
Amy Purvis

BETTY IRENE MOORE SCHOOL OF NURSING AT UC DAVIS

Evaluating the Multilevel Profile of LGBT Caregivers in the United States
Kurt David, Swapna Peter, Janice Bell

Associations of Caregiver Health and Loneliness Among Older Adults in California
Valerie Steinmetz, Janice Bell

Understanding Opioid Rehabilitation Needs for Young Adult Black Women Ages 18-30
Shantel Porter, Jessica Draughon Moret

An Examination of Hospital Length of Stay in Adults with Moderate Traumatic Brain Injury
Nicole Hiebert, Janice Bell, Steven Cavanagh

A Model for Exploring Dementia Caregiver's Experience of Ambiguous Loss
Tia Kadiu

BOISE STATE UNIVERSITY SCHOOL OF NURSING

Anesthesia and Traumatic Brain Injuries: What's the Impact?
Amber Baranek, Emma Watson, Lucy Zhao, Ryoko Kausler

Nurse Burnout Related to Nurse-Patient Ratios
Sophie Dornan, Emma VanDam, Lucy Zhao, Ryoko Kausler

BRIGHAM YOUNG UNIVERSITY COLLEGE OF NURSING

Weight Management in Patients Taking Psychotropic Medications
Blaine Winters, Neil Peterson, Audrey Eyring, Chloe Clark, McKenzie Stones, Stacie Woolley

Increasing Safety in Electric Scooter Users
Hyrum Prestwich, Blaine Winters

Using TSET to Evaluate Nursing Student Study Abroad Experiences
Emily Wilson, Janelle Macintosh, Cynthia Johnson, Renea Beckstrand

Recommendations to Address Repetitiveness in People Living in Long-Term Care
Jeana Olmo, Corinna Trujillo-Tanner, Jessica Allen, Jessica Barney, Emily Lewis, Madeline Hoyt, Carmen Bowen, Rebekah Perkins, Mitchel Holmes, Linda Edelman

Recommendations to Address Combativeness in Long-Term Care Settings
Jessica Barney, Jessica Allen, Corinna Trujillo Tanner, Jeana Olmo, Emily Lewis, Maddy Hoyt, Carmen Bowen, Rebekah Perkins, Mitchel Holmes, Linda Edelman

Recommendations to Preserve Autonomy and Dignity in Long-Term Care Settings: Bathing
Jessica Edwards, Corinna Trujillo Tanner, Jessica Allen, Jessica Barney, Jeana Olmo, Emily Lewis, Maddy Hoyt, Fabianna Stracuzzi, Carmen Bowen, Rebekah Perkins, Mitchel Holmes, Linda Edelman

Recommendations for Addressing Depression in Long-Term Care Settings
Emily Lewis, Corinna Trujillo Tanner, Jessica Allen, Jessica Barney, Jeana Olmo, Maddy Hoyt, Fabianna Stracuzzi, Carmen Bowen, Rebekah Perkins, Mitchel Holmes, Linda Edelman

Coordinating a Large-Scale Interdisciplinary Mass Casualty Simulation Drill
Matthew Anderson, Calvin Reed, Pyper Schmutz, Rylie Rasmussen, Adrianna Watson, Sondra Heaston, Jeanette Drake

CALIFORNIA STATE UNIVERSITY DNP CONSORTIUM
(CSU FULLERTON & CSU LOS ANGELES)

Enhancing Epidural Consent with Post-Dural Puncture Headache Education
Chloe Gomez, Sadeeka Al-Majid, Mark Gabot

A Knowledge-Based Approach to Increase the Uptake of Influenza Vaccine in Pregnancy

Karla Hill, Sadeeka Al-Majid, Angela Sojobi

Mitigation of Nurse Leader Burnout
Dawn Price, Elizabeth Winokur, Shauna Pearce

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
DEPARTMENT OF NURSING

The Association of Diabetes Incidence and Food Swamps Using the All of Us Data
Evangeline Fangonil-Gagalang

Improving Pulmonary Functions Via Digital Health Devices in the Elderly with Dialysis
Yeon Kim

Nursing Students' Experiences of Incivility and Stress During Clinical Practice
Younglee Kim

BSN Students' Self-Report of Activities Conducive to Online Learning
Henrietta Nwamu

Noise Affects Quality of Care Given by Nurses
Laura Rodriguez-Requeno, Lauren Acosta, Nils Weber

Precision Health: Roles and Functions of the Registered Nurse
Mary Anne Schultz

Exploring Attitudes of Nursing Students Providing Services to the Unhoused
Anne Lama, Diane Vines, Geoffrey Cui

Social Determinants of Health: Perception of University Nursing Students
Pinthusorn Pattayakorn

IDAHO STATE UNIVERSITY SCHOOL OF NURSING

Community Movie Day: An Intervention to Improve Readiness for Advance Care Planning
Emily Harames, Melody Weaver

Psychiatric Technician Competency to Care for Mental Health Inpatients
Ashely Arcy R. Chermak, Mary Nies

Effects of Physical Activity on the Mental Health of Older Adults
Michelle Kruse, Cathy Arvidson

PANDAS in the Outpatient Setting: Evaluating and Overcoming Barriers to Access Care
Candice Brunger, Michelle Anderson

Prevention of Delayed Referral to Specialty Care: A Primary Care Prerogative
Ben Andersen, Kristy Crownhart

Exploring Pharmacovigilance: Knowledge and Attitudes of Providers and Students

Joseph Machtinger, Kristy Crownhart

Assessing Risk for Readmission in Patients with Heart Failure
Amanda Bertram, Melody Weaver

Teamwork, Team Nursing, and Aristotle: The Whole Versus the Sum of the Parts
Mopelola Agboje

Honoring and Nurturing Self in Nursing Guided by Watson's Caring Science
Kimberly Womack

INTERMOUNTAIN HEALTH

Four-Legged Friends to the Rescue
Michelle Shiao

The Impact of Catheter Removal Timing on Urinary Retention Following Cesarean Birth
Corie Hoskins, Amy Dempsey, Karen Kaley

Efficient Education on a Self-Directed, Microlearning App
Sarah Andre, Angela Plascencia

Enhancing Mock Code Team Training Using RCDP
Jennifer George

Utilizing Criteria Based 2-Person Skin Assessments
Bailey Binning

You Are Not a Lift!
Jamie D'Ausilio, Tyler Peck

Using Evidence to Elevate Inpatient Hospice Nursing Case on a Medical/Oncology Unit
Bonnie Hoch, Scott Christensen

Recognition for All: A Coordinated and Equitable Approach to Caregiver Awards
Elizabeth Corless, Dani Kurtz

Erasing Brain Drain Infections: An Interdisciplinary, Evidence-Driven Bundle
Danielle Hill, Cali Wightman, Sara Johnson, Shaelyn Hogue, Nick Murray, Janine Roberts

New Nurses on Your Tail: Nurse/Physician Partnerships to Enhance Orientation
Danielle Hill

Using RCDP to Improve Knowledge Retention During Pediatric Codes
Allyson Pierson, Janine Roberts

LOMA LINDA UNIVERSITY SCHOOL OF NURSING

Use of the Switch Tool for Better Patient Handoff in the Perioperative Department
Melanio Dylan Robles, Robin Pueschel

The Impact of Education to Improve Transgender Care
Debbie Nkumba, Robin Pueschel

Item Development for an Index to Measure Multiple Sclerosis-Related Suffering
Carolyn Wilder, Jennifer Graves, Amanda L. Gooding, Salem O. Dehom, Elizabeth J. Taylor

Let's Start at the Very Beginning: ABC's (Awareness of Breast Cancer)
Eliza Kym G. Liwanag, Gloria Mattson Huerta

Grip Strength among Turkish Nursing Students and Staff
Sharon Atienza, Ayse Cil Akinci, Cemile Savci, Salem Dehom, Lisa Roberts

Nurse Emotion Recognition and Clinical Empathy: An Observational Study
Annika Daphne Bilog, Elizabeth Johnston Taylor

Improving Confidence and Competency among RN Preceptors Through Education
Lisa Soul Macias, Joanna Yang, Salem Dehom

Getting a Grip on Nepalese Nursing Staff and Students' Strength
Jeremy Pangan, Tara Jung Gurung, Lisa Roberts

Development of a Situational Judgment Test on Family Supportive Supervisor Behaviors
Safiye Sahin, Lisa Roberts

Nurse Spiritual Responses to Covid-19 Caring: A 1-Year Follow-Up Study
Briana M. Carr, Elizabeth Johnston Taylor

Expanding Nursing Education Capacity: A PhD Program with Global Impact
Iris Mamier, Anne Berit Petersen, Ellen E'Errico

MAYO CLINIC ARIZONA

Project on Point: Procedure Orders Improvement for Interventional Radiology
Pamela Silva, Katrina Freeman, Cathy Hannafin, Thomas Williams, Megan Davis, Nicole Burns

Innovation in the Emergency Department: Developing a Throughput Nurse
Cindy Landis, Amy Santhanakrishnan, Jarelle Petrides, Katelyn Cheetham

Think Positive: Improving IV Medication Titration Management
Kimberly Davis, Jane Sederstrom, Paula Munch, Tracy Thomas, Jamie Petti,
Brigid Kiley, Shae Saint-Amour, Sarah Black

Elevated D-Dimer and Development of Pressure Injury in Patients with COVID19 Diagnosis
Mary Famorca, Jessica Morris, Charles Peworski, Kai Singbartl

You've Got Mail: Refining InBasket in Ambulatory Gynecology
Kaylee Smith, Jennifer Hallof, Emily Tobin

Enhancing Timeliness of Care for the Ambulatory Urology Patient

Jill Trombino, Christine Aliory

Educate & Elevate: Improving Patient Satisfaction Through Patient Education
Allison Sieck

All Eyes on Universal Protocol: An Evidence-Based Approach to Ophthalmic Procedures
Julia Chase, Ruthie Mangino

Breaking Down the Bundle: Staged Implementation of the ABCDEF Bundle
Kassandra Hyde

Increasing Awareness of Osteoporosis in the Community
Yvonne Kalcich, Lacey Peck, Chris Aliory

Time to Level-Up! Implementation of a Nurse-Led SPHM Champion Course
Tracie Koehne, Vanessa Vonich

Developing Clinical Nurses as Educators on a Dedicated Education Unit
Brittany Lester, Yvonne Kalcich, Laura Spitaleri, Ashley Tenison, Katherine Peterson

MONTANA STATE UNIVERSITY MARK & ROBYN JONES COLLEGE OF NURSING

Effects of Racial Disparities on Birth Outcomes in the United States
Grace Burton, Claire Johnson, Erica Sebring, Alexis Palmer

Nurse Work Shift and Patient Health Outcomes
Moriah Osborn, Charlotte Sayle

Inhale Confidence, Exhale Anxiety: Investigating the Role of Breathing Techniques in Reducing School Nurse Visits for Anxious Elementary Students
Julie H. Alexander-Ruff, Sarah A. Ruff, Michaela Alvers, Steven Kerbel

OREGON HEALTH & SCIENCE UNIVERSITY SCHOOL OF NURSING

Understanding Experienced Nurse Transitions: An Integrative Review of the Literature
Darcey Ayala

Creating and Implementing a Trauma-Informed Birth Plan in a Faculty Midwifery Practice
Kensie Blodgett

Post-Traumatic Growth in Healthcare Workers: Exploring Work-Related Factors
Kylee Deterding

Surveying the Landscape of Mentorship Opportunities for New Graduate Midwives
Leah Harrison

Standardizing Day-of-Discharge Lactation Education in a Midwifery Practice
Katelynne Knight

Chronotype and Circadian Timing in Day and Chronic Night-Shift Nurses

Kathryn McAuliffe

Increasing Access to Low-Barrier Narcan in Oregon
Jeannie Thompson

PACIFIC LUTHERAN UNIVERSITY SCHOOL OF NURSING

Evaluating Intervention with Human-Centered Design & Implementation Science
Shumenghui Zhai, Weichao Yuwen, Jennifer Sonney, Jonika Hash, Teresa Ward

Social Determinants of Health in Oaxaca: A Cultural Case Study
Carrie Ann Matyac

PROVIDENCE HEALTH & SERVICES

An Evidence-Based Skin Management Improvement Project in the Intensive Care Unit
Chelsea Lanoo

The Monego-Barra ED Fall Risk Assessment Tool (MoBa)
Roxanne Barra

New Grad Residency Tactical Expansion as a Staffing Crisis Response
Caitlin Silva

Implementation of Fall Ambassador Safety Team (FAST)
Jerome Codilla, Nkiru Chukwudi, Sohl Chapman

Health Professional Concern for Environment and Behaviors to Protect Climate Health
Mary Jo Kelly, Gale Springer, Sarah Johnson, Teresa Rangel

Implementing In-Room Recycling on a Family Maternity Center
Sarah Johnson

Improving Emergency Department Belongings Inventory Documentation
Stephanie Lai, Katie Whitehead

In-Depth Perspectives of Faith Community Nurses Serving in a Western U.S. State
Beverly Bateman

Nurse Engagement in Clinical Scholarship Linked to a Hospital-Based,
Virtual Nursing Research Course
Trisha Saul, Frances Chu, Rosemary Timmerman, Teresa Rangel

Perceived Moral Distress among Patient-Facing Healthcare Professionals During COVID-19
Sarah Sumner, Karen Colorafi, Teresa Rangel

Healthcare Staff Climate Health and Environmental Stewardship Framework Awareness
Patricia Joubert, Angie Shemwell, Barb Nguyen, Teresa Rangel, Rosemary Timmerman

Preventing and Responding to Workplace Violence in the Emergency Department

Stephanie Lai

SAINT MARTIN'S UNIVERSITY SCHOOL OF NURSING

Enhancing End-of-Life Communication Using the COMFORT Model
Malia Paulsen

Improving Thermoregulation in Premature Neonates
Bethany Calaycay

Improving Substance Use Disorder Outcomes Using Trauma Informed Care
Bethany Renner

Parental Bereavement Care Following the Expected Loss of a School Age Child
Jaden Carson

Interventions to Manage Workplace Violence Against New Graduate Nurses
Alyssa Gaskill

Decreasing Gossip Related Violation to Improve Pediatric Patient Confidentiality
Kelene Mandefro

Implementing a Perinatal Loss Toolkit in the Family Birth Center
Shania Lazcano

Decreasing Secondary Traumatic Stress in Emergency Department Nurses
Gabriella Forbes

Implementing Doula Care for Women of Color to Improve Pregnancy Outcomes
Joy Bamford

Nonpharmacological Nursing Interventions for Patients with Anxiety in Crisis
Elaine Pyke

STANFORD MEDICINE CHILDREN'S HEALTH

A Four-Step Evidence-Based Pushing Protocol
Sarah Long

UNIVERSITY OF ALASKA ANCHORAGE SCHOOL OF NURSING

Generalist Forensic Healthcare Training: A New Model of Education
Angelia Trujillo

Population Health Promotion Utilizing Public Service Announcements
Angelia Trujillo, Marisa Bune

TB Awareness in Alaska
Siemee Xiong, Francis Anino, Emma Blei, Madele Copeland,
Megan Huynhle, Skylar Madel, Jenelle Spear, Matthew Watkins

UNIVERSITY OF ARIZONA COLLEGE OF NURSING

Feasibility of Remote Sleep Intervention Techniques for Gynecologic Cancer Survivors
Maria Berkeley, Julia Gaumond, Ana Morales, Jason Ong,
Sonia Ancoli-Israel, Edward Tanner, Terry Badger, Rina Fox

Parenting Stress and a Multisensory Infant Massage Intervention: A Secondary Analysis
Stefanie Boyles, Aleeca Bell

The Theory of Integrative Nurse Coaching for Indigenous Dialysis Patients
Deidre Chase, Meghan Skiba, Ruth Taylor-Piliae

Applying Innovative Methods to Develop Health Education Text Messages
Amanda Chriswell, Bianca SantaMaria, Terry Badger,
Alejandro Recio-Boiles, Rina Fox, Meghan Skiba

The Theory of Unpleasant Symptoms in the Oncologic Pediatric Intensive Care Unit
Daisy Garcia, Terry Badger, Rina Fox

Activation of C-Tactile Afferents During Babywearing for Infant Withdrawal
Lisa Grisham, Lela Rankin

A New Theoretical Model for Health Beliefs Among Native Hawaiians at Risk for Diabetes
Anela Labore, Ruth Taylor-Piliae

Evaluating Colonialism as a Social Determinant of Health
Jacquelyn Martin, Thaddeus Pace

Newly Promoted Middle Management Nurse Leaders' Lived Experience
Daniel Vadillo, Cindy Rishel

Charting a Course to Excellence: Navigating Data Science Needs in Nursing Education
Pankaj Vyas, Sheila Gephart

Breastfeeding & Biomarkers: A Secondary Analysis of a Case-Control Study
Sarah Weinstein, Elise Erickson

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO SCHOOL OF NURSING

California Child Care Directors' Integrated Pest Management Knowledge and Practices
Evelyn Bigini, Judith Kunitz, Abbey Alkon

The Patient Experience of Receiving Lifelong or Long-Term Infusion Therapy
Tami Boroughf, Meg Wallhagen

Midwives' Experience Telehealth and Remote Care: A Systematic Mixed Methods Review
Bethany Golden, Shaimaa Elrefaay, Monica R. McLemore,
Amy Alspaugh, Kimberly Baltzell, Linda S. Franck

A Universal Industrial Hygiene Standard for Measuring Surgical Smoke
Merideth Lewis, Suzaynn Schick, Stella Bialous

Infant Negative Affect and Emotional Reactivity Linked to Maternal Depression at Six Months Postpartum
Karley Mariano, Sandra Weiss

An Interpretive Phenomenological Study on Black Women's Perinatal Experiences
Celestine Ofori-Parku, Kimberly Baltzell, Ifeyinwa Asiodu

Cortisol Markers of Postpartum Depression Differ from Those of Anxiety & Stress
Ling Xu, Sandra J. Weiss

UNIVERSITY OF COLORADO COLLEGE OF NURSING

Stigma and Healthcare Access Among Transgender and Gender-Diverse Older Adults
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Jennifer Rigby, Tiffany Hood, Elizabeth Blackwell, Matt Anderson

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Jessica Judd, Angela Page, Jonelle Fitzgerald

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Kendra Williams, Anne Kendrick, James Stimpson

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Katherine Brunner, Kelley Trump, Amber Nielson

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Rachel Margeson, Angela Page, Rhonda Carter

WIN HONORS

The Western Institute of Nursing recognizes members and colleagues with the following awards and honors in 2024.

DISTINGUISHED RESEARCH LECTURESHIP

The Distinguished Research Lectureship recognizes a senior researcher whose research efforts have made significant and sustained contributions to nursing.

Lissi Hansen, PhD, RN, May E. Rawlinson Distinguished Professor, Oregon Health & Science University School of Nursing

WIN EMERITUS

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.

Pamela H. Mitchell, PhD, RN, FAHA, FAAN, Professor Emeritus, University of Washington School of Nursing

JO ELEANOR ELLIOTT LEADERSHIP AWARD

Established in 1988, the Jo Eleanor Elliott Leadership Award recognizes an individual who has advanced the mission and goals of WIN through sustained, exemplary leadership and service.

Jane H. Lassetter, PhD, RN, FAAN, Dean and Professor, Brigham Young University College of Nursing

ANNA M. SHANNON MENTORSHIP AWARD

The Anna M. Shannon Mentorship Award was established in the name of the former Dean and Professor of the College of Nursing, Montana State University – Bozeman who unselfishly supported and promoted the professional growth of other nurses in the West.

Nancy Pike, PhD, RN, CPNP-PC/AC, FAHA, FAAN, Professor and Director of Research, University of California, Los Angeles School of Nursing

CAROL A. LINDEMAN AWARD FOR A NEW RESEARCHER

The New Researcher Award was established in 1976 by Carol A. Lindeman to support nursing researchers early in their careers. In 1987, the award was renamed to recognize Dr. Lindeman for her contributions and support of colleagues.

Scott S. Christensen, PhD, MBA, APRN, ACNP-BC, Adjunct Assistant Professor, University of Utah College of Nursing

Kayla D. Longoria, PhD, MA, RN, Postdoctoral Scholar, University of California, San Francisco School of Nursing

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.

Deidre L. Chase, BSN, PhD Student, University of Arizona College of Nursing

MARTHA (MARTY) J. LENTZ WIN / CANS DISSERTATION GRANT

The purpose of the Martha (Marty) J. Lentz WIN/CANS dissertation grant is to foster doctoral student dissertation research. The grant was named after Dr. Marty Lentz in 2020 in recognition of her many contributions to nursing research and to WIN.

Shannon A. Cotton, RN, BSN, PhD Student, University of California, Irvine Sue & Bill Gross School of Nursing

SIGMA / WIN RESEARCH GRANT

Sigma and WIN jointly sponsor a research grant to encourage qualified nurses to contribute to the advancement of nursing through research.

Loretta Tsu, MA, PhD Student, University of Colorado College of Nursing

WIN / NLN RESEARCH GRANT

WIN and the National League for Nurses jointly sponsor a grant to promote research conducted by academic educators, clinical nurse educators, or doctoral nursing students.

Anita Fitzgerald, PhD, RN, AGNP, CNE, Assistant Professor, California State University, Long Beach School of Nursing

GERIATRIC NURSING RESEARCH AWARD:
SENIOR RESEARCHER

WIN recognizes evidence of excellence and/or innovation in gerontological nursing research.

Jung-Ah Lee, PhD, RN, FGSA, FAAN, Professor, University of California, Irvine Sue & Bill Gross School of Nursing

REGIONAL GERIATRIC NURSING EDUCATION AWARD

WIN recognizes evidence of excellence and/or innovation in gerontological nursing education.

Paula Cox-North, PhD, ARNP, Teaching Professor, University of Washington School of Nursing

CONFERENCE SCHOLARSHIP AWARD

WIN is committed to structuring opportunities to advance health equity in the West and specifically to promoting health equity through WIN programming and to developing nurse leaders from diverse populations.

Lisa Diaz, RN, MSN, CDCES, PhD Student, University of California, Los Angeles School of Nursing

WESTERN ACADEMY OF NURSES

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.

Heather Coats, PhD, APRN-BC, FAAN, Assistant Professor, University of Colorado College of Nursing

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Ruth Taylor-Piliae, PhD, RN, FAHA, FAAN, Professor and Interim PhD Program Director, University of Arizona College of Nursing

Allison R. Webel, PhD, RN, FAAN, Interim Robert G. and Jean A. Reid Executive Dean, Aljoya Endowed Professor in Aging, University of Washington School of Nursing

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