



Madonna University Center for Research Presents

Symposium for Research, Scholarship and Creativity

Wednesday, April 17, 2024 • 12–5 p.m.

DIRECTOR'S WELCOME MESSAGE

10th Annual Symposium for Research, Scholarship and Creativity



The Madonna University Annual Symposium for Research, Scholarship and Creativity this year is once again in a hybrid format.

The Symposium provides students and faculty with the opportunity to showcase their scholarly accomplishments in research, practice, performance and creativity with the Madonna University community.

Our Blackboard platform contains poster presentations, musical performances, posters with oral presentations, and a variety of scholarly presentations. The annual Symposium for Research, Scholarship and Creativity is an important event of the Center

for Research. It is designed to promote scholarship, quality research practices, and creative endeavors. Through this event, we continue to provide students with an opportunity to hone their presentation skills, share innovative ideas, showcase capstone research, project work, artistic expression, creative performances and many other forms of scholarship. Additionally, Madonna Talks, provide a fast-paced update on faculty and student research and scholarship. Grounded by our values, Madonna University promotes scholarly inquiry and creativity not only for advancing one's own knowledge, skills, and understanding but also, and more importantly, for the critical contribution of expanding our capacity to serve others and contribute to the greater good. Thank you for your continued engagement, participation, and interest in the Symposium for Research, Scholarship and Creativity.

A handwritten signature in black ink that reads "Elizabeth A. Prough". The signature is fluid and cursive.

*Elizabeth A. Prough, Ph.D.
Interim Dean, Graduate School and Director, Center for Research
Professor Political Science*

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MADONNA TALKS

Villain or victim? Public and Scientific Discourse on Community Cats

Community cats, also referred to as feral cats, have become a center of controversy since the eighties, when first studies on the impact of their predation on wildlife, especially on native birds, were published. As the number of the latter dwindle at alarming rates due mainly to habitat loss, other secondary factors play an important role as well. Among those factors, along with pesticide use, or window and car collisions, cat predation seems to play a significant role. The unique ecological niche occupied by community cats as well the social and cultural significance of the species in Western societies bring about raging conflicts between conservationists concerned with saving native birds from extinction and those actively supporting cat colonies. Both sides present opposing research findings and ethical arguments.

The authors aim at presenting a wide spectrum of scientific and public views on community cats found in literature and in position statements of various stakeholder organizations. The examined articles span over diverse disciplines from ecology, and anthropology to ethics. The opinions of such disparate entities as North American veterinary associations, the Audubon Society, the ASPCA, the Humane Society of the United States, and PETA are analyzed and compared.

The complexity of the issue is emphasized as arguments reflect its ecological, ethical, social, cultural, and political dimensions. The presenters discuss the reliability of available data on free-roaming cat predation, effectiveness of existing remedies, such as the TNR (Trap-Neuter-Release) approach, and cultural constraints regarding lethal options. Some possible solutions to this stalemate are considered.



Boguslawa Gatarek, Ph.D.

Director, M.S. in Non-Profit Leadership
College of Arts and Sciences



Andrew Domzalski, Ph.D.

Professor and Chair, Humanities;
Director, BA in Animal Studies
College of Arts and Sciences



Elaine Hockman, Ph.D.

Senior Research Associate
Public Research & Evaluation Services



Fr. Charles Morris, M.U.P., M.Div.

Assistant Professor
Religious Studies and Philosophy
College of Arts and Sciences

Progress Toward Environmental Justice in Michigan: 1990-2020 (Race, Class, Pollution, and the Public Health)

Through multivariate statistical analysis and mapping we will present the changing landscape of the relationship between race, class, pollution and the public health in Michigan over the past 30 years. The last couple of minutes will be devoted to pointing to future research and opportunities for students to participate in this ongoing research.



**Karen J. Schmitz, Ph.D.,
R.D.N.**

Department Chair
Nutrition and Dietetics Professor
College of Arts and Sciences

Unwrapping the Truth: The Link Between Ultra-Processed Foods and the Obesity Epidemic

Many studies have shown a link between rising rates of consumption of ultra-processed foods (UPFs) and excess body weight, but few studies have compared consumption patterns seen in high income countries to rising rates of imports of UPFs and the regulatory frameworks governing their availability in low- to middle-income countries (LMICs). LMICs often face the challenge of the double burden of malnutrition, where undernutrition coexists with overweight and chronic diseases. With rising concerns about the detrimental health effects of UPF consumption, particularly in LMICs where their availability is increasingly prevalent, looking at these current trends and understanding effective regulatory approaches is extremely important. This review synthesizes current research on UPF consumption trends, socioeconomic determinants and the efficacy of regulatory measures implemented in various LMICs. By comparing trends between high income and low-income countries, this review aims to identify disparities and similarities, providing valuable insights to potential strategies for addressing this growing public health challenge.

Understanding Why Schools Fail to Improve

Understanding the underlying issues that drive the success or failure of curriculum enactments is an important step in redesigning school reform efforts. Despite years of school reform initiatives and programs designed to improve student achievement, little to no progress has been noted. Research in effective school practices clearly outlines pathways to success, but these practices are rarely enacted successfully. The interplay of binding operational decisions, interests, and currency within social systems ultimately threatens the viability of curriculum initiatives. This research suggests defensive bias and defensive mythology are expressions of interests and, as such, are evidence of the exercise of power and illustrate the context-transcending nature of power. Curriculum enactments are often under threat within school organizations due to these processes. Attenuating mythologies generated by low-status members of the organization persist well after leaders leave their roles within the organization and become a meaningful narrative that is difficult, if not impossible, to debunk.



Lester Sharon, Ph.D.

Program Director, Transformational
School Leadership
Assistant Professor
College of Education and Human
Development

POSTER PRESENTATIONS

Undergraduate

Poster Number: 1

Methods to Enhance and Preserve Proteinaceous Impressions from the Skin of Decedents

Rachel Austin, Emily Biggott, and Amanda Woods

Advisor: Jessica Zarate

Homicides and violent crimes often result in bloodshed; the constant substrate involved in physical altercations in the commission of violent crimes is human skin. Thus, it is likely blood impressions are left on the skin of living victims or decedents during these violent interactions. Yet, skin is one of the least studied substrates in the impression discipline. A comparative analysis between two commonly used dye stains, Amido Black and Hungarian Red and a newer method, Zar-Pro™ Fluorescent Blood Lifters were conducted in collaboration with the Forensic Research Outdoor Station at Northern Michigan University determining efficacy amongst methods for the enhancement of semen smears and blood impressions on decedent skin during the early stages of decomposition. During the early stages of active decomposition, donor skin will deteriorate, thus recoverable impressions will also be degraded and or damaged, yet this degradation is not perilous for the recovery of proteinaceous materials as long as the epidermal skin is still intact. Thus, even during active decomposition up to ten days, skin, arguably one of the most difficult substrates for impression recovery, can produce viable impressions and the recoverability of this vital evidence can now be re-evaluated by practitioners in the field.

Poster Number: 2

The Facilitators and Barriers of Adherence to Cervical Cancer Screening

Sarah Marion, Analise Craig, Sierra Greener, Damon Montroy, and Alicia Stanley

Advisor: Dr. Adlah Hamlan

Cervical cancer screening is a universal health promotional practice that should be completed yearly starting at the age of 21. Cervical cancer can be screened by a Pap test (Pap smear or cervical cytology)

or Human Papillomavirus (HPV) test (starting at the age

of 30). Barriers to cervical cancer screenings include not having access to health care clinics, no insurance, no transportation to health care appointments, fear of cervical cancer screening, and limited time to attend health care appointments. Facilitators to cervical cancer screenings includes having a cervical cancer screening before, having access to health care services, having insurance or the means to pay for costs, and having a female family member who has had a cervical cancer screening before. The purpose of this study is to identify the facilitators and barriers to cervical cancer screenings. A descriptive cross-sectional design was used to collect the data from convenience sample of 20 female students at Madonna University. The inclusion criteria of study participants include female, Madonna University students, and age 21 years and above. The data was collected by using the questionnaire that was developed by the researcher based on the reviewing literatures. The tool is composed of two parts: demographic part and the facilitator and barriers part. The data collected through posting the study flyer that includes the tool as QR code on the female restrooms, halls, and classrooms. Research ethical considerations were met by ensuring the participants anonymity and confidentiality. Results are in progress and will be completed before April 30, 2024.

Poster Number: 3

Nursing Student Burnout

Manal Nasser, Abeer Nasser, and Raneam Rabat

Advisor: Dr. Angela Gogolowski

Nursing student burnout is a prevalent issue impacting the academic performance and well-being of future healthcare professionals. Statistical evidence highlights its significance, with rates as high as 60% reported among nursing students. This literature review aims to explore the causes, consequences, and potential interventions for nursing student burnout. The research question guiding this review is: What factors contribute to nursing student burnout, and what strategies can mitigate its effects? The review identifies workload, clinical demands, personal factors, and support systems as key independent variables contributing

to burnout. Understanding and addressing nursing student burnout are essential for ensuring the mental health of students and the quality of patient care in the future nursing workforce.

Poster Number: 4
The Nurse's Role in Pain Management
Hannah Wagatha, Cassidy Schwenk, and Amber Stempien
Advisor: Dr. Linda Nikpour

The purpose of this study is to define the nurse's role in pain management among Madonna nursing students and faculty. Nurses have a critical role in pain management and need to be constantly updated with new practices in pain management as the role is critical inpatient care. This study was a convenience sample of Madonna nursing students and faculty conducted with a questionnaire with an embedded Likert scale using a scale of 1-5 responses to our research topic. Data collection is still in progress. Criteria used to select participants was that they had to be older than 18 years of age, attend or work at Madonna University, and must be a nursing student or faculty.

Graduate

Poster Number: 5
Impact of digital Marketing on Social Media Consumer Behavior and Purchase Decisions Among Young Adults
Ifeanyi Agulanna
Advisor: Dr. Jacob Frimenko

The advent of digital marketing and the proliferation of social media platforms have revolutionized consumer behavior and purchase decisions among young adults. This capstone study delves into the intricate relationship between digital marketing strategies on social media platforms and consumer behavior patterns among young adult demographics. Through a comprehensive literature review, this research elucidates on the multifaceted impact of digital marketing initiatives, including content marketing, influencer marketing, and social media advertising, on shaping consumer attitudes, preferences, and purchase intentions. Moreover, this research endeavors to uncover the underlying mechanisms driving consumer attitudes and brand loyalty in response to digital marketing campaigns on social media platforms. By analyzing empirical data and survey responses, the study aims to elucidate the correlations between consumer

attitudes, perceived quality, brand awareness, and subsequent purchase decisions among young adults. Insights derived from this analysis will provide valuable guidance for marketers and businesses seeking to optimize their digital marketing strategies to effectively engage with and influence the purchasing behavior of young adult consumers in the digital age. The analysis of this project is still in progress and will be completed before April 30, 2024.

Poster Number: 6
Consumer Attitudes and the Transition to Electric Vehicles
Michael Aldini
Advisor: Dr. Jacob Frimenko

The automobile industry is transitioning from Internal Combustion Engine (ICE) vehicles to new plug-in Electric Vehicles (EVs). The drive to transition from vehicles powered by fossil fuels to electric power has been driven by environmental concerns, energy independence, and security interests. The United States government has increased emission standards and incentives for automakers to make fuel-efficient vehicles and encouraged the development and transition to Electric Vehicles. Automakers worldwide have set goals to transition to Electric Vehicles and become carbon neutral. Electric Vehicles are not without their challenges, however. Whether producing Electric Vehicles is genuinely the more environmentally friendly solution remains. Moreover, whether modern power grid infrastructure can be transformed into net-zero carbon emissions and handle the influx of Electric Vehicles is to be seen. The researcher aims to measure consumer attitudes toward Electric Vehicles in Southeast Michigan and compare the results to national polling surveys that have been conducted. The researcher created a survey instrument consisting of seventeen questions, later divided into three categories: consumer behavior, experience, and incentives. These dimensions were analyzed for statistical significance in the results from Southeast Michigan respondents and compared to national polling with similar criteria. The research will examine the degree to which consumers are ready to transition to electric vehicles or whether consumers feel that automakers should explore alternative energy sources.

Poster Number: 7
Prevention of Multi-Organ Failure in Sepsis
Sandy Aller
Advisor: Dr. Patricia Clark

Sepsis is a medical emergency that impacts at least 1.7 million adults in the U.S., resulting in nearly 270,000 deaths per year (CDC, 2023). The multi-organ failure caused by severe systemic hypotension as a result of the body's reaction to a systemic infection is the hallmark of sepsis and septic shock. The maintenance of appropriate tissue perfusion as indicated by a mean arterial pressure (MAP) goal of 65 mmHg is a crucial element of sepsis management as indicated by International Guidelines for Management of Sepsis and Septic Shock 2021 (Evans et al., 2021). This is accomplished through the administration of intravenous (IV) fluid resuscitation with the support of vasopressors, and close monitoring of lactate levels to guide the restoration of circulatory perfusion, thereby ensuring adequate tissue oxygenation and perfusion through a multimodal approach. This project looks at three process indicators: sepsis bundle documentation of fluid resuscitation (min. 30 mL/kg), vasopressor therapy implementation as indicated by MAP 65 mmHg, and serum lactate lab draw every 2-hours, within 3 hours of initial identification of the condition. The outcome indicator is to maintain adequate end-organ perfusion as evidenced by the MAP goal of 65 mmHg for the first 24 hours. The role of Advanced Practice Registered Nurse (APRN) in this project is to study the benefits of maintaining MAP 65 mmHg through these multimodal treatments.

Poster Number: 8
Teacher and Student Perceptions of the Adequacy of the Amount of time Allowed for Lunch
Shaima Al-Mihdar
Advisor: Dr. Karen Schmitz

The duration of school lunch breaks may play a crucial role in student's well-being and academic performance. This study investigates the perceptions of both teachers and students (with parent input) regarding the adequacy of the time allotted for lunchtime and the elements that influence mealtime. Surveys via online links were emailed to four 4th-grade teachers and 40 students (with parent input) at Roosevelt Elementary School in Livonia, Michigan USA, through Qualtrics. Findings indicate divergent perspectives between teachers and students/parents. Teachers have more positive

or neutral views about the adequacy of lunchtime (50% positive, 50% neutral). Teachers' negative comments about the lunch experience were focused on parent choices in home-provided lunches, specifically packaging and food choices. Surveyed students and parents were largely negative (82%), viewing lunchtime as too short and citing difficulties in completing meals, socializing, and relaxing. Responses from students and parents demonstrated a positive correlation between overall dissatisfaction with the length of lunchtime and dissatisfaction with social time (0.03), as well as the amount of time for relaxation (<0.1). Students and parents want more time to eat (64%), less wait time (50%), and more or fewer food options (50%), highlighting a disparity with teacher perspectives on lunchtime adequacy. This perception gap may influence how lunch policies are developed and evaluated. Further research on a school-district-wide scale would be useful to generate more generalizable data, and explore whether these issues are district-wide.

Poster Number: 9
Early Literacy Skills
Laurie Baden
Advisor: Theresa Kelly

This researcher found that there was an existing problem in her prekindergarten classroom. An important literacy skill is lacking in knowledge and exposure specifically the skill is concept of print, letter recognition, and letter sounds. The problem needs to be improved. It effects students, parents, and teachers as well. Experts agree it is essential for prekindergarten students to have these literacy skills as a good foundation for learning. To address this problem pre and post assessments were implemented in my classroom. By collecting this data evidence was gained as to what was working (or not working) in the program. The intent of this professional development project is to provide early childhood strategies to utilize in the classroom and at home.

Poster Number: 10
Administration Rate and Perceived Efficacy of COVID-19 Booster
Ashley Begeman
Advisor: Dr. Jacob Frimenko

Coronavirus disease 2019 (COVID-19) took the world by storm. The development of the initial vaccination series and the many boosters that have been offered continue to be a controversial topic.

Initially many companies required employees to receive a completed primary series vaccination or risk unemployment. Fast-forward almost 5 years later and many companies have now lifted their vaccine requirement. The purpose of this study was to measure the population willingness to receive a COVID-19 booster vaccine and the perceived efficacy compared to governmental statistics in the US. As the population has learned more about COVID-19 these past few years, it is my hypothesis that the population willingness to receive the vaccine booster and their perceived efficacy of the vaccine has decreased. The dependent variable in this study is the populations perceived efficacy & willingness to receive a COVID booster injection. The independent variables in this study are the (1) percentage of boosters administered since the initial vaccination administration and (2) the reported efficacy of booster injections. The snowball data collection method was used for participants to take a 15-question online survey, via Qualtrics. The recruitment statement contained a link to the Qualtrics survey for participants to complete anonymously; no personal identifiable data was be collected. Analysis and interpretations are in progress and will be completed prior to the Symposium for display/discussion.

Poster Number: 11
The Relationship Between Exercise, Appetite, Mood, and Age
Morgan Benson
Advisor: Dr. Karen Schmitz

As individuals age, there tends to be fluctuations or declines in appetite, energy and mood and increases in weights leading to an increased risk of obesity. Aside from consuming a low-quality diet, there are many other factors that could be contributing to this trend toward obesity. The purpose of this study was to assess the effect that exercise can have on an individual's mood and hunger cues, and how age plays a role. The participants of the research study were men and women between the ages of 18-65 years, living in Wayne County, Michigan. One hundred and five participants were recruited via social media, using both Facebook and Instagram. Participants accessed the survey using an online Qualtrics link. Every participant was asked their age and their residing county, prior to completing the survey, to assess whether each individual met the study criteria. Research showed that 43% of participants exercise 1-2 times per week and 32% exercise 3-4 times per week. The 18-25-year-old

age group was found to exercise most often. Fifty-one percent of participants said they feel happy on days that they exercise, and 58% feel somewhat unhappy on days they do not exercise. Sixty-four percent of participants stated that their hunger cues increase on days that they workout. The results suggest that exercise slightly improves mood and hunger cues. More research is needed to gather adequate statistics regarding the correlation between exercise, appetite, mood & 56-65-year-olds, as they had the lowest amount of participation at about 10%.

Poster Number: 12
The Efficacy of Subcutaneous GLP-1 Receptor Agonist on BMI Reduction in Obesity
Heather Berry
Advisor: Dr. Vickie Gordon

Obesity is a global disease which potentiates significant burden on individuals, healthcare costs, society, and the economy (Meier, 2021). Obesity increases risk factors for cardiovascular disease (CVD), diabetes mellitus type two (T2DM), and mortality (CDC, 2019). Obesity management guidelines recommend weight loss through both pharmacotherapeutics and lifestyle modification to prevent subsequent weight gain (CDC, 2019) while maintaining a healthy Body Mass Index (BMI) (18.5-24.9) goal (Pratley, et., al., 2019). According to the American Gastroenterological Association (AGA) in conjunction with UpToDate Guidelines for obesity management, it is recommended that pharmacologic therapy of anti-obesity medication should be used in conjunction with lifestyle modification in maintaining a healthy BMI without weight regain (Uptodate, 2021) & (Grunvald, E. et al., 2022). This quality improvement project will evaluate Glucagon-like Peptide-1 receptor agonist (GLP-1RA) weekly subcutaneous semaglutide compliance with evidence-based guidelines for BMI reduction and weight loss. Weekly dosing of GLP-1RA with dose-doubling every four weeks to decrease weight by five pounds per month over a 12-week period. A retrospective medical chart review of twenty patients evaluated and treated in an urgent care setting will be completed. Process indicators will include documentation of semaglutide dose and BMI on day one of each individualized weight loss program as well as the semaglutide dose and BMI on the last day of the treatment program unless a contraindication is present. The data will be analyzed utilizing descriptive statistics. The role of the advanced practice provider in this study will be discussed.

Poster Number: 13
Early Identification of Acute Kidney Injury (AKI) following Coronary Artery Bypass Graft (CABG)

Jasmine Bingham

Advisor: Dr. Vickie Gordon

Cardiac surgery encompasses an array of procedures dedicated to the surgical treatment of pathologies related to the heart. This includes multiple procedures such as valve replacements, aortic repairs, and coronary artery bypass grafts (CABG). Along with cardiac surgery comes high perioperative risks, a few including myocardial stunning, systemic inflammatory response, stroke, arrhythmias, and acute kidney injury (AKI) (Sens et al., 2022). AKI is a frequent and well-recognized complication of cardiac surgery. It is characterized by impaired renal function. AKI complicates 22% to 36% of cardiac surgical procedures, not only leading to increased morbidity and mortality, but increased healthcare costs as well (Engelman et al., 2019). AKI that is not addressed can lead to further impaired kidney function, requiring the use of renal replacement therapies (RRT). Identifying patients with AKI following cardiac surgery can lead to early implementation of interventions aimed at preventing further kidney damage and use of RRT. This quality project evaluates the adherence to current guidelines in assessment of AKI in adult patients following CABG. Twenty medical records will be examined at random in a retrospective review. Two process indicators measured include the daily assessment of serum creatinine and urine output in the postoperative period. The expected outcome is early identification of AKI within 24 hours of surgery. Data will be analyzed through descriptive statistics. The role of the nurse practitioner will be discussed.

Poster Number: 14
Empowering At-Risk African-American and Latino Youth

Cianna Brown

Advisor: Dr. LaToi Smith

This review explores the limitations facing African-American and Latino youth in the United States, focusing on mental health inequalities, cultural needs, and the risks associated with community violence and substance abuse. By drawing on different academic sources, including studies and theoretical frameworks like resilience theory, it highlights the need for customized interventions and community engagement to address

these challenges. It emphasizes protective factors such as access to mental health services and supportive relationships, while discussing risk factors such as exposure to negative environments and systemic obstacles. It examines how mutual aid groups can provide culturally sensitive support and advocate for systemic change. Lastly, it proposes an evaluation plan to measure the effectiveness of a culturally tailored mental health program for youth. Overall, the review stresses the importance of comprehensive and culturally competent approaches in empowering African-American and Latino youth to overcome obstacles and flourish in their communities.

Poster Number: 15
Extubation within 8 Hours Post Cardiac Surgery

Pamela Carroll

Advisor: Dr. Patricia Clark

Coronary Artery Bypass Graft Surgery (CABG) can be an optional procedure to treat adult patients with cardiovascular disease to optimize their cardiac function for longer survival (Borges et al., 2022). CABG procedures are performed annually in the United States, estimated 500,000, and are at substantial cost to the healthcare system (Bansel et al., 2013). Fast track extubation protocols have been shown to reduce hospital stays, increase early mobilization, and decrease mortality and morbidity for patients undergoing CABG (Wong et al., 2016). Rates of VAP are increased 6-21-fold for patients intubated greater than 48 hours and show a greater risk associated with the longer duration of mechanical ventilation (Craven, 2000). Typically, extubation within 8 hours after surgery is optimal so that early mobility can be achieved (Wong et al., 2021). The American College of Cardiology and American Heart Association Guidelines for CABG has recommended a fast-track protocol for early extubation (Lawton et al., 2022) including a target goal of extubation less than 8 hours after CABG surgery. This continuous quality improvement project will evaluate the compliance with the evidence-based guidelines for CABG surgery supporting early extubation less than 8 hours post-surgery to decrease length of stay, decrease hospital costs and promote early mobilization. A retrospective chart review of twenty patients admitted for CABG surgery will be completed. Process indicators will include documentation of extubation from mechanical ventilation within 8

hours of CABG surgery and documentation of early mobility within 24 hours of CABG surgery. The data will be analyzed using descriptive statistics. The role of the advanced practice nurse will be discussed.

Poster Number: 16
Baby Blues or Postpartum Depression?
When is the Best Time to Adequately
Screen and Treat?

Colleen Curran

Advisor: Dr. Patricia Clark

Postpartum depression (PPD) is a mental health phenomenon the medical community is only starting to understand further. Risks known to contribute to development of PPD are biological factors such as personal mental health history, and family history of mental health disorders. Environmental factors such as adverse childhood experiences, or history of abuse. Psychosocial factors play a role such as low socioeconomic status and inadequate social support. Inadequately treated PPD is associated with a low quality of life, and in extreme cases lead to suicide. Using the American College of Obstetrics and Gynecologists (ACOG) Clinical Practice guideline for screening, diagnosis, treatment, and management of mental health conditions during pregnancy and postpartum those who could benefit from identification and treatment of PPD. Utilizing the John Hopkins Model as framework to create a continuous quality improvement project to demonstrate the role of the Advanced Practice Registered Nurse (APRN) in quality improvement initiatives, what is actually practiced in Obstetric care and what guidelines are actually recommending.

Poster Number: 17
The Use of TXA in Traumatic
Hemorrhage

Chantelle Dawson

Advisor: Dr. Patricia Clark

Trauma is a top cause of injury and death for all ages. Unintentional injuries, suicide, homicide, and assault are mechanisms of injury in trauma care. According to the American College of Surgeon (ACS) (2014) the most common cause of death within the first hour of trauma is hemorrhage. Similarly, 50% of death that occurs within the 24 hours following injury are caused by hemorrhage (ACS, 2014). Reductions in mortality are observed with implementation of massive transfusion protocols that include Tranexamic acid (TXA) (ACS, 2014). As an adjunctive agent, TXA reduces mortality

and is recommended in protocols for massive transfusion. TXA is an antifibrinolytic that reduces the breakdown of clots and decreases bleeding (ACS, 2014). The ACS recommends administration of TXA within 3 hours of injury to actively bleeding patients in their Trauma Quality Improvement Program: Massive Transfusion in Trauma Guidelines. This quality improvement project will evaluate adherence to the guidelines for massive transfusion protocols which recommend administration of TXA 1 gram within 3 hours of injury to trauma patients who are actively bleeding followed by a continuous infusion of 1 gram intravenously over 8 hours as an adjunctive therapy to decrease mortality at 24 hours (ACS, 2014). A retrospective chart review of 20 random patients admitted for trauma that were actively bleeding will be conducted. The process indicators include administration of TXA within 3 hours of injury and initiation of massive transfusion protocol. Data will be analyzed using descriptive statistics. The role of the advanced practice nurse will be discussed.

Poster Number: 18
Does Participation in High School
Athletics Enhance the Development of
Players' Life Skills?

Michael DiPonio

Advisor: Dr. Jacob Frimenko

First, the problem being studied in this research project is the priorities of high school athletes and how consumed they can be in their athletic ability. Times are different these days even with young athletes, kids attend school for a chance to excel and be successful in their desired sport. The overall method of this research study is a survey designed based off the perceptions of faculty members of Divine Child High School. All copies of the survey were distributed as hard copies and filled out within the parameters of Divine Child High School without the researcher present. The survey had five categories of specific life skills that include respect, initiative, time management and perseverance. Each category has four or five subcategories to rate on a scale of one to five. (one being the worst and five being the best) The faculty members perceived that the seniors had more developed life skills than the freshman did. Comparing football players versus non-football players didn't show any significant difference.

Poster Number: 19
Assessment of CHA2DS2-VASc Score for Anticoagulation in Patients with Atrial Fibrillation

Chaniece Doyle

Advisor: Dr. Vickie Gordon

Atrial Fibrillation (AF) is the most common arrhythmia in the world. Its occurrence continues to increase annually. Atrial Fibrillation is a rapid, irregular atrial heart rhythm (Mitchell, 2024). This irregular arrhythmia causes turbulent blood flow and improperly contracted atria, leading to thrombus formation. Those who have AF are more prone to thromboembolic events. Thus, it is associated with increased mortality and morbidity in these patients. Currently, the American Heart Association (AHA)/American College of Cardiology (ACC)/American College of Clinical Pharmacy (ACCP)/Heart Rhythm Society (HRS) recommends utilizing the CHA2DS2-VASc risk calculator to determine the need for anticoagulation to prevent a thromboembolic event in those with AF. The 2023 ACC/AHA/ACCP/HRS clinical practice guidelines state that for patients with AF who have a CHA2DS2-VASc score of ≥ 2 in men and ≥ 3 in women, anticoagulation is recommended to prevent stroke and systemic thromboembolism. This Continuous Quality Improvement project aims to evaluate the compliance of the 2023 ACC/AHA/ACCP/HRS clinical practice guidelines. The data of 20 patients with AF and a CHA2DS2-VASc score of ≥ 2 in men and ≥ 3 in women will be conducted retrospectively through a chart review. Process indicators are patients diagnosed with Atrial Fibrillation and CHA2DS2-VASc score. This data will be collected and analyzed. The role of the Advanced Practice Nurse is to promote optimal health, thus implementing the best evidence-based practices.

Poster Number: 20
Are Madonna Men's Basketball Players Satisfied with their College Experience?

Geordon Duncan

Advisor: Dr. Jacob Frimenko

This study researched and examined the differences of student athletes that participated as a part of the Madonna men's basketball team. These past basketball players were broken down into two categories, student- athletes and athlete- students, depending on their responses to a 14- question survey. The survey was broken down into several different sections, giving the researcher the ability to see each individuals' thought process and

feelings toward their time at the university. The goal of this research project was to determine if individuals that focused more on academics with basketball being their secondary were more satisfied with their overall college experience compared to the individuals that focused on basketball first. After an examination, research suggest that those whose main focus was academics were more accepting and satisfied with their experience at Madonna University. This paper only applies to men's basketball players at Madonna University as the data will be different at every university.

Poster Number: 21
Last Days of Life in Hospice
Mindy Fernando

Advisor: Dr. Vickie Gordon

Hospice visits in the final days of life are essential for comfort, emotional support, and symptom management, ensuring a dignified end-of-life experience. The National Hospice and Palliative Care Association (NHPCO) states that while the national average of visits by registered nurses or social workers has increased since 2020 within the last seven days of life from an average of 69% to 74%, there is still a significant gap in patients not being seen within the last three days of life. In July 2023, the national average, according to the NHPCO, was only 53.1% of patients who received a visit by a registered nurse or social worker within the last three days of life. This quality improvement project will include a retrospective chart review of twenty patients, examining the quality of end-of-life care for hospice patients, focusing on the frequency of in-person visits by healthcare professionals and assessment using the Edmonton Symptom Assessment Scale (ESAS) in their final days. It aims to ensure hospice patients receive necessary care and symptom management, addressing barriers such as weekend service gaps and staffing issues. The process indicators will include assessing the number of hospice patients who received in-person visits from a registered nurse or social worker in the last three days of life. The second process indicator will ensure that an ESAS was included in the visit in the last three days of life. The data will be analyzed using descriptive statistics. The role of the advanced practice nurse will be discussed.

Poster Number: 22
Systemic Corticosteroids in the Acute Exacerbation of COPD
Christina Fortine
Advisor: Dr. Patricia Clark

Chronic obstructive pulmonary disease (COPD) is a chronic, progressive lung disease and is the third most common cause of morbidity and mortality worldwide. An acute exacerbation of COPD (AECOPD) is an acute worsening of respiratory symptoms that often requires hospitalization for management (Agarwal, 2023). COPD exacerbations contribute to decline in lung function, decreased quality of life, and increased mortality rate. Over one-fifth of patients hospitalized for AECOPD die within one year of discharge (Hurst et al., 2020). Acute exacerbations are responsible for the majority of financial burden placed on healthcare systems related to COPD. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) recommends the use of systemic corticosteroids in AECOPD to improve lung function, oxygenation, and shorten recovery time and length of hospital stay, with the duration of therapy for no more than five days (GOLD, 2024). Systemic Corticosteroids in the Acute Exacerbation of COPD is a quality improvement project that looks at two process indicators that include systemic corticosteroids being ordered on admission for patients with a diagnosis of AECOPD and discontinuation of systemic corticosteroids by day five. Twenty medical charts will be reviewed retrospectively to evaluate two outcome indicators. Patients admitted to the hospital with a diagnosis of AECOPD who received systemic corticosteroids will: 1) have improved oxygenation and 2) a hospital length of stay less than five days. The data collected will be analyzed using descriptive characteristics. The advanced practice registered nurse has a direct role in diagnosing and managing patients that are admitted for AECOPD.

Poster Number: 23
Proper Evaluation and Treatment of Group A Streptococcal Disease in the Pediatric Population
Karly Gammon
Advisor: Dr. Vickie Gordon

A sore throat is a common symptom that presents at an outpatient clinic in the pediatric population, often viral in origin. Group A Streptococcus (GAS) pharyngitis is a serious bacterial throat infection

that can lead to invasive group A strep disease if not diagnosed and treated appropriately. Invasive group A strep disease can include cellulitis with blood infection, necrotizing fasciitis, pneumonia, streptococcal toxic shock syndrome or Acute Rheumatic Fever. The Centor Clinical Decision rule was developed to assist providers in the evaluation and management of a 'sore throat'. This validated clinical prediction rule can help providers make more informed decisions in the use of rapid antigen tests (RADT). The 2021 Canadian Pediatric Society guideline for the diagnosis of Group A streptococcal pharyngitis (Sauve et al, 2021) has recommended that patients presenting to the clinic with a sore throat between the ages of 3-14 must meet three out of four criteria based off the Centor Clinical decision rule to receive a RADT: exudate or swollen tonsils, tender or swollen anterior cervical lymph nodes, fever >100.4 , absence of cough. This quality improvement project will evaluate compliance with evidenced- based guidelines for rapid antigen testing in the pediatric population presenting to the clinic to reduce the rates of unnecessary testing/ treatment and improve early detection and treatment in high-risk patients. A retrospective chart review of twenty patients with a chief complaint of sore throat will be completed. Process indicators will include patients that met the Centor criteria to receive a RADT, and was the patient swabbed on that visit? Data will be collected and analyzed using descriptive statistics. Analysis and interpretations are in progress and will be completed by April 30th.

Poster Number: 24
A Comprehensive Examination of Stress, Burnout, Emotional Well-being, and Mental Health Support Among Nurses
Jasmine Garland
Advisor: Dr. Jacob Frimenko

Nurses' well-being is affected by the demands of their workplace, and in turn, their well-being affects their work and the people they care for. Nursing is viewed as a calling, but it is a very demanding profession. The aim of this study is to examine the wellness of nurses in regards to their emotional health, stress, burnout, mental health support, and job satisfaction. I collected 78 responses on a quantitative anonymous survey. The independent variables I analyzed were age, department, and years of experience. The only p value that showed significance was in relation to emotional health and years of experience. It was found that nurses have

higher levels of emotional health when they have less than a year of experience. After a year, nurses report lower levels of emotional health. I found that the nurses that have more than 25 years rate their emotional health the highest. All other age groups, years of experience, and departments showed no significant difference when looking at their levels of stress, burnout, mental health resources, and emotional health.

Poster Number: 25
The Digital Detox Program at Home Retreat
Heniben Gheewala
Advisor: Dr. Jacob Frimenko

The study presents an innovative exploration into the transformative effects of a structured digital detox on individuals' screen time, stress levels, and family interactions. This study fills the gap in current literature by assessing the outcomes of intentional digital disengagement, leveraging insights on the benefits of physical activity and digital detox for mental health and family relationships. The study was conducted with 28 participants, who underwent a weekend-long detoxification process from digital devices within the confines of a home retreat setting. The methodology employed a comprehensive approach, comprising pre-detox and post-detox surveys alongside a curated detox guide. The pre-detox survey aimed to establish baseline data on participants' screen time habits, stress levels, and quality of family interactions. Following this, participants engaged in the detox program, which included guided activities such as yoga, reading a book, bonfire, meal together and nature walks, designed to facilitate disconnection from digital devices and encourage mindfulness and physical activity. The post-detox survey then assessed to evaluate the program's impact. Preliminary results revealed significant reductions in screen time and stress levels among participants, alongside notable enhancements in family interactions. These outcomes suggest that a structured digital detox program can foster healthier screen time habits, alleviate stress, and improve family dynamics. Importantly, the research showed participants valued disconnecting, enhancing mental well-being and family bonds through digital detox initiatives.

Poster Number: 26
Self-Regulating Behavior in Pre-K Students
LaQuenta Goode
Advisor: Theresa Kelly

Since the return to in-person learning students' behavior has become progressively inappropriate. The behavior at book time has become so difficult; teaching literacy concepts is faced with new challenges. I created a regimented schedule for students to follow and check off tasks as they complete them. Therefore, creating an environment in which pre-k students are responsible for regulating their behaviors that leads to a more productive book time.

Poster Number: 27
Alphabetic Knowledge and Letter Sounds in Pre-K
Quineisha Gordon-Wood
Advisor: Theresa Kelly

When looking at early education we always seem to look past the fact that the young years are the most beneficial to children when it comes to learning new things rather it's academically, socially emotionally or physically. As early childhood educators we always focus on what we call the "whole child" and sometimes we seem to forget that when teaching a young "whole child" we are still preparing them for the next steps in life whether it's educational wise or not. As children learn and develop alphabetic knowledge, they learn to recognize upper case and lower-case letters. They also discover that there are sounds associated with each letter. (<https://eclkc.ohs.acf.hhs.gov/> 2022) Many children lack the knowledge of identifying letters when entering into pre-k and some even lack when entering kindergarten. This study will be running for four weeks Monday through Thursday for a maximum of 15- 20 minutes during school hours. The setting is in a Pre-K classroom in the city of Detroit. The children being served are low-income children living in a high-risk neighborhood. Four children have been handpicked for this enrichment program and are going to work in a small group. The children that have been selected are all four years of age. Because the enrichment program will take place during school hours, teachers picked students that have good attendance that would benefit from it and parents that will be patient and considerate. Throughout the four weeks teachers will be able to come up with different hands-on learning experiences that the children are able to interact with while still having fun and learning at the same

time. Children will be given a pre-test and post - test to assess their knowledge and see where each child stands with letter and sound recognition at both times.

Poster Number: 28
Does Participation in Group Exercise Classes Lead to Greater Weight Loss Compared to Individual Workouts?

Jordan Graham

Advisor: Dr. Jacob Frimenko

This study aims to investigate whether participation in group exercise classes leads to greater weight loss compared to individual workouts. In this research for effective weight loss strategies, understanding the influence of exercise settings is important. The research involves a quantitative analysis that surveys a sample of 60 participants engaged in either group exercise classes or individual workout routines. Participants will be monitored over a 5 week period, tracking their weight loss progress from Week 1 to Week 5, and analyzing factors that contribute to their success or challenges. The research design includes collecting data on participants exercise frequency, and overall well-being. Statistical analyses will be working to identify patterns and correlations between exercise settings and weight loss results. Findings from this study could contribute important insights to fitness, and individuals seeking effective weight loss strategies.

Poster Number: 29
A “Loss” Opportunity: Grief Education in Social Work Curricula

Meg Halstead

Advisor: Dr. LaToi Smith

The experience of loss is universal, whether it is death or non-death related, and social workers – regardless of their area of specialization – must be prepared to meet the needs of grieving clients. A “Loss” Opportunity: Grief Education in Social Work Curricula surveys a sample of 100 accredited MSW programs for the presence of loss-related education in their curricula. This sample included 42 MSW programs with additional certificates in Gerontology, Hospice care, and Holistic Health. Of this sample, only 40% of MSW programs were found to have elective coursework dedicated to grief-and-loss content, with an additional 12% of programs having relevant content associated with a graduate certificate program. Based on a review

of the literature, this data is found to be consistent with previous research regarding the presence of grief-and-loss content – of lack thereof – in social work education. These results have significant implications for social work graduate students who are insufficiently prepared to deal on a personal and professional level with the ramifications of death and non-death losses among their clients.

Poster Number: 30
Implementing the Modeling Method of Instruction in Science Education: A Study of Experienced Modelers’ Practice

Denise Henderson-Bills

Advisor: Dr. Sue Ann Sharma

This study examined the early implementation stages of the Modeling Method of Instruction (MMI) in the science classroom to find the most valuable strategies for effective implementation. In this qualitative study, eleven teachers were interviewed to uncover effective implementation strategies. Interview data were analyzed using the constant comparative method. The focus of this study was to discover challenges faced in the exploration and installation phases of MMI implementation and the best strategies utilized by seasoned modelers. MMI is a research-based inquiry framework encompassing the Next Generation Science Standards (NGSS). Addressing the multiple components for effective delivery is critical in exploring and installing new scientific instructional programs like MMI. In addition, purposeful planning ensures fidelity of implementation. Further, support throughout installation is essential to effective inquiry teaching and learning. The study determined that training is required for maximum success of the Modeling Method of Instruction. Additionally, teacher leadership qualities and flexibility are critical factors for successful implementation, especially throughout the initial phases. Further, being patient and using data to increase MMI’s effectiveness benefits the modeler’s trust in the process. Finally, the study concluded that there is an overwhelming need for mentoring to improve the support necessary for implementing MMI effectively.

Poster Number: 31
Lung Cancer Screening: Benefits and Barriers

Whitney Holman
Advisor: Dr. Patricia Clark

Lung cancer causes more deaths worldwide than any other cancer (Lung Cancer Facts 2023 - Lung Cancer Research Foundation, n.d.). According to the CDC, smoking cigarettes is the leading risk factor for lung cancer (What Are the Risk Factors for Lung Cancer?, 2023). 80% of lung cancer deaths are due to smoking (Lung Cancer Facts 2023 - Lung Cancer Research Foundation, n.d.). Although current smoking has dropped, in 2021 there were still over 28 million adults in the US who currently smoke (Current Cigarette Smoking Among Adults in the United States, 2023). The USPSTF recommends annual lung cancer screening with low-dose CT (LDCT) for all adults ages 50-80, who have a 20 pack-year history, and are currently smoking or quit within the last fifteen years (Recommendation: Lung Cancer: Screening, 2021). "In 2022, only 4.5% of all those eligible were screened" (State of Lung Cancer, 2024, para. 3). This quality improvement project entitled Lung Cancer Screening: Benefits and Barriers will assess the compliance of providers and patients with USPSTF lung cancer screening guidelines. A retrospective chart review of 20 patients who meet guideline eligibility criteria will be completed. Process indicators will include assessing eligibility at each visit for annual lung cancer screening with LDCT based on age, smoking status, and pack year history as well as ensuring an order is placed in chart for lung cancer screening with LDCT for eligible patients. The data will be analyzed using descriptive statistics. The role of the advanced practice nurse will be discussed.

Poster Number: 32
Benefits of Statin Therapy
Kimberly Ikewood
Advisor: Dr. Vickie Gordon

Patients diagnosed with type 2 diabetes are at increased risk for developing co- morbidities. According to Fox et al. (2016), hyperlipidemia has a direct correlation with the increasing risk of developing coronary heart disease (CHD). Less than 50% of patients who have an elevated low density lipoprotein cholesterol (LDL-C) levels are receiving proper treatment, therefore high-risk patients remain at higher risks for new CV events (Fox et al., 2016). A study by Vitturi & Galiardi

(2020), examines effects of poor adherence or statin interruption on clinical outcomes of ischemic stroke. The study found that suboptimal use of statins was associated with worse clinical outcomes in stroke patients. This project examines the effects of statin therapy on lowering LDL-C levels with two process indicators: PCP diagnoses male diabetic patients and initiates statin therapy, and patient follows up in 4-12 weeks to assess the reduction in LDL levels. Twenty random medical records will be examined in a retrospective review. The expected outcome is compliance with the AHA Cholesterol Guideline of adults aged 40-75 years who have diabetes receive a statin, regardless of the patient's estimated 10-year risk for ASCVD. Data analyzed using descriptive statistics. This population of patients benefit from the Advanced Practice Nurse (APRN) since they are many times providers in the primary care setting where statin therapy is initiated. Since APRNs are often providers in this setting, it's important for them to understand best practices that will aid in reducing the harmful outcomes of patients diagnosed with diabetes and hyperlipidemia.

Poster Number: 33
How Wellness/Health is Impacted by Support Dogs
Ryleigh Jacobs
Advisor: Dr. Jacob Frimenko

This research investigates the influence of support dogs on the wellness and health of residents in assisted living facilities. The study aims to discern whether there is a significant difference in wellness and health outcomes when residents are visited by support dogs. Existing literature consistently highlights the positive impact of support dogs on various aspects of human well-being. This includes psychological benefits such as reduced stress, anxiety, and symptoms of depression, as well as physiological advantages like lowered blood pressure and heart rate. Additionally, support dogs facilitate social interactions, communication, and a sense of companionship. The study will involve 33 fully cognitively capable residents across multiple assisted living facilities, with interactions strictly conducted for research purposes. Participants will be randomly assigned to treatment or control groups, with one group completing pre and post-tests assessing well-being using a modified 5 Item Well-Being Index. The research protocol ensures ethical considerations, including informed consent and counterbalancing interventions for the control group. Data collection will be conducted in a secure

and confidential manner, with all documents stored securely for three years post-study completion. Anticipated benefits for participants include enhanced emotional well-being, improved social connections, and potentially positive physiological effects. Analysis and interpretations are in progress and will be completed by April 30th.

Poster Number: 34
Dense Breast Tissue and Additional Breast Cancer Screening in Women
Allison Janos
Advisor: Dr. Patricia Clark

Breast cancer (BC) is the most frequently diagnosed cancer and remains the leading cause of cancer-related deaths among women Worldwide according to Tollens et al. (2023). The same authors report that in 2020, an estimated 2.3 million women were diagnosed with BC and 685,000 women may die from BC. When BC is diagnosed at an early stage, it is associated with an exceptional 5-year survival rate of almost 99 percent (Tollens et al., 2023). However, the early detection of BC relies upon screening mammography to reduce the mortality rate in BC. Unfortunately, screening mammograms may fail to detect BC in women with dense breast (DB) tissue because of reduced sensitivity of mammograms, leading to higher rates of BC (Bodewes et al., 2022). Therefore, DB is a crucial indicator of BC risk and research reveals that women with DB benefit from additional imaging with magnetic resonance imaging (MRI) or automated whole breast ultrasound (ABUS). In fact, NCCN (National Comprehensive Cancer Screening) guidelines were updated in October 2023 to reflect this recommendation in DB. To determine if women with DB are receiving additional screening tests in practice, a retrospective chart review of 20 charts will be reviewed. Process and outcome indicators include notifying women of DB, educating them about updated recommendations, and providing prescriptions for additional testing. The data will be analyzed randomly and with descriptive statistics obtained from the chart review. The role and importance of the advanced practicing registered nurse (APRN) will be discussed in detail.

Poster Number: 35
Experimental Investigation of Media Impact on the Hearing Perception of the Deaf Community
Molly-Kate Johnson
Advisor: Dr. Jacob Frimenko

This capstone research delved into the intricate dynamics between media, defined as TV and Movies, portrayals of the Deaf community and the subsequent perceptions formed by the hearing community. Before the research began it was approved by the Institution Review Board (IRB). It was a casual investigation with a treatment that was created to change people's attitudes. The study meticulously examines how media representations influences the hearing community's views on the intelligence, competency, and sociability of Deaf individuals. Employing a methodical pretest-treatment-posttest model, the research scrutinizes these perceptions through a comprehensive survey consisting of 38 questions. Participants, 42 in total with 39 providing valid responses, were exposed to a thoughtfully produced 13-minute series of vignettes, placed between the pretest and posttest. The cohort was diverse, segmented into age brackets of 18-30, 30-50, and 50+ years, as well as categories based on their prior knowledge of Deaf culture. The findings were: the media's depiction significantly altered the preconceived notions held by the hearing community. Contrary to initial assumptions, the media showed that Deaf individuals have more intelligence than previously believed by the hearing participants. However, the youngest demographic harbored a belief that Deaf individuals lack sociability—a stereotype that was effectively challenged in the treatment, which also showcased that Deaf individuals are more competent than originally perceived. In conclusion, the researcher deduces that the media, through its portrayals, serves as a potent conduit for shaping perceptions. It not only dispels prevalent misconceptions but also casts the Deaf community in a positive and empowering light, underscoring the pivotal role media plays in influencing societal attitudes and beliefs.

Poster Number: 36
Impact of Socioeconomic Status on Risk Tolerance

Reilly Johnson

Advisor: Dr. Jacob Frimenko

This study aims to examine the influence of socioeconomic status on individuals' risk tolerance without discussing specific results. By analyzing data across various socioeconomic backgrounds, I seek to understand how factors such as income, education, and occupation contribute to differing risk attitudes. The study's purpose is to provide insights into the relationship between socioeconomic status and risk tolerance, shedding light on potential disparities in financial decision-making. Understanding these dynamics can inform the development of tailored strategies for wealth management and financial planning across diverse populations.

Poster Number: 37
Triple Combination Therapy in Patients with Pulmonary Arterial Hypertension
Kristin Jonas

Advisor: Dr. Vickie Gordon

Pulmonary arterial hypertension (PAH) is a devastating disease caused by increased pressure in the pulmonary arterioles. PAH affects a small subset of the population with the prevalence of disease ranging from 15-25 people per million. The 1-year mortality rate has been reported at 86% (Emmons-bell et al., 2022). PAH is defined as a mean pulmonary pressure greater than or equal to 25 that is diagnosed with a right heart catheterization, echocardiogram, and ventilation/perfusion scan (Hoepfer et al., 2013). Patients with pulmonary hypertension usually present with ambiguous symptoms such as fatigue, dyspnea on exertion, fainting, and chest pain. Pulmonary hypertension is a progressive disease that usually progresses to right sided heart failure and mortality (Leber et al., 2021). This project examines two process indicators including diagnostic criteria and the initiation of prostacyclin analogues along with phosphodiesterase-5 inhibitor and endothelin receptor antagonists in patients with pulmonary hypertension. Diagnostic criteria for pulmonary hypertension include PAP mean greater or equal to 25 mm Hg, pulmonary capillary wedge pressure greater than 15, and peripheral vascular resistance greater than 3 wood units (Prins & Thenappan, 2017). This retrospective review will be conducted by the selection of twenty random medical records.

The outcome indicator will include assessment of pulmonary artery pressure via echocardiogram, right heart catheterization, and assessment of patients' symptoms. Data will be analyzed using descriptive statistics. The role of the APRN in PAH patients is medical management using best practice guidelines and symptom management including evaluation of hydration status and need for diuresis.

Poster Number: 38
GLP-1 RA for Weight Loss Assistance
Devona Kachi
Advisor: Dr. Patricia Clark

Obesity is a global health issue that continues to rise in the adult population. It is defined as a "body mass index (BMI) of >30 kg/m²" (Christensen et al., 2019, p. 957). The causes of obesity are multifactorial and complex, which often creates a barrier to care. The World Obesity Federation approximates that "800 million people are currently living with obesity" (Masood & Moorthy, 2023, p. 284). Obesity is associated with numerous comorbidities and poor health outcomes which include, "increased risk of type 2 diabetes (T2D), cardiovascular disease, and mortality" (Friedrichsen et al., 2020, p. 755). Research related to the pharmacologic management of obesity has not been able to keep up with the consistent upward slope in obesity rates until recently with the approval of GLP-1 RA for weight loss. This project looks at three process indicators which include having the patient follow up 3 months after starting a GLP-1 RA, documenting the percent of weight loss in the chart, and discontinuing the medication if the patient lost <5% of body weight. Twenty patient charts will be analyzed in a retrospective review. The expected outcome is that patients that are prescribed a GLP-1 RA will have lost >5% of body weight after 3 months' time. The data will be analyzed using descriptive statistics. The role of the APRN in relation to the care of this population is to be knowledgeable about the guidelines related to anti-obesity medications, and to reduce the stigma associated with this intervention.

Poster Number: 39
Exploring Multimodal Analgesia for the Management of Rib Fracture Pain in Geriatric Patients
Vanna Kazarian
Advisor: : Dr. Patricia Clark

Rib fractures can be life altering for the geriatric patient. Pain associated with rib fractures can be multifactorial and inadequate pain control can lead to negative complications and outcomes with increased length of stay (LOS). In the setting of rib fractures, a multimodal approach has been suggested to address both pain control and respiratory performance (Chou et al., 2016). The American College of Surgeons (ACS) set forth guidelines for the management of rib fracture pain. According to the ACS, multimodal analgesia (MMA) is the use of multiple analgesics to target multiple central and peripheral pain pathways and act synergistically to improve the analgesic effect while reducing the doses of any single analgesic agent (Best Practices Guidelines for Acute Pain Management in Trauma Patients, 2020). Guideline adherence is important to decrease mortality and morbidity in addition to hospital length of stay. This project focuses on adherence by reviewing the electronic health records of twenty geriatric rib fracture patients admitted to a level I trauma center in Detroit, Michigan. Two process indicators were identified and reviewed. The first indicator was the administration of acetaminophen and Motrin at a constant serum level, with documented pain scores. The second process indicator is improved respiratory performance as evidenced by documented incentive spirometry values. In conclusion, the reader will distinguish the Advanced Practice Registered Nurse (APRN) role in preventing adverse outcomes in geriatric trauma patients experiencing rib fractures, and the importance of multimodal pain management.

Poster Number: 40
Progressive Ventilator Mobility
Nicole Kirk
Advisor: Dr. Vickie Gordon

There are many complications that patients experience when placed on mechanical ventilation in the ICU and the longer a patient remains on mechanical ventilation, the more pronounced these complications can become. Complications include decreased functional and neurocognitive capacity, DVT/PE and delirium (Balas et al., 2012). Balas et al., (2012) reports that ICU acquired delirium can cost

up to \$6.5 to \$20.4 billion annually. It is essential that an early mobility program be present to negate these complications. Studies have shown that early mobilization can reduce delirium, improve functional outcomes, reduce hospital length of stay, and reduce mortality in patients with acute respiratory failure (Green, 2016). Thus, it is essential to start addressing mobility inclusion criteria in daily rounds and change mobility orders to initiate progressive mobility protocols in these patients.

This quality improvement project will look at patient charts and examine if the patients who meet the inclusion criteria for progressive mobility had their orders changed from bed rest to activity as tolerated so that a progressive mobility protocol can be started on the patient. A retrospective chart analysis will be done on 20 patients admitted for acute respiratory failure. Process indicators will include seeing if mobility was addressed by the ICU providers and if mobility orders were changed accordingly. The data will be evaluated using descriptive statistics and the role of the APRN will be discussed.

Poster: 41
Regional Resilience: Understanding Wayne County's Diversity
Patricia Landreth
Advisor: Dr. Jacob Frimenko

This study investigates intricate dynamics of Wayne County, Michigan, and its regions, focusing on demographic variations, community sentiments and economic indicators. Through a mixed-methods approach, quantitative data were collection from the U.S. Census Tool, while qualitative insights were gathered through semi-structured interviews. Findings reveal distinct regional profiles across Western Wayne County, Downriver and Detroit Proper, characterized by variations in gender distribution, age demographics, racial composition, educational attainment, tax revenue, income, and employment rates. Additionally, qualitative analysis uncovers unique regional identities and shared priorities, emphasizing workforce development, economic growth, and diversity as unifying themes. The convergence of qualitative and quantitative data highlights the interrelationships between demographic, economic, and socio-cultural factors, underscoring the importance of regional collaboration and targeted interventions to address disparities and promote inclusive growth. Based on these findings, recommendations are provided for promoting regional

collaboration, targeting economic development initiatives, investing in education and workforce development, addressing socioeconomic disparities, enhancing data accessibility and transparency, and prioritizing continued research and evaluation. Overall, this research offers valuable insights for policymakers, community leaders, businesses, and residents in Wayne County, providing a foundation for collaborative efforts aimed at advancing regional development and enhancing the well-being of these diverse communities.

Poster: 42

Attitudes Concerning Recycling Electric Vehicle Batteries

Yong Lee

Advisor: Dr. Jacob Frimenko

The accelerating adoption of electric vehicles (EVs) in recent years has brought about significant advancements in transportation electrification. However, alongside the proliferation of EVs, concerns have arisen regarding the environmental impact and economic sustainability of lithium-ion battery disposal. This multifaceted study delves into public attitudes towards the recycling of EV batteries, with a specific focus on addressing waste issues and implementing cost-cutting strategies throughout the battery lifecycle.

Poster: 43

Influence of Dietary and Lifestyle Habits on Weight Change

Chris Martin

Advisor: Dr. Jacob Frimenko

The study investigated the influence of dietary and lifestyle habits on weight change through a survey conducted using a structured questionnaire. The first questionnaire which consisted of 5 dietary and 5 lifestyle questions was given to 30 men's basketball players at Madonna University. In addition, all 30 participants' weights were taken. Three months later the same 30 basketball players were given the same 10 question survey and had their weight taken down as well. The results showed a direct correlation between lifestyle and diet habits and weight change. The survey explored various dietary and lifestyle choices of participants and their impact on weight fluctuations over time. Findings suggest a significant correlation between certain dietary patterns, lifestyle habits, and weight change, highlighting the

importance of informed decision-making regarding food choices and lifestyle behaviors to maintain a healthy weight.

Poster: 44

The Relationship Between Emotions and the Consumption of Diets High in Ultra-processed Foods

Alaa Mashalah

Advisor: Dr. Karen Schmitz

Ultra-processed foods, characterized by extensive processing and additives, have become widespread in modern diets, raising concerns about their impact on emotional well-being. This study investigates the association between the consumption of ultra-processed meals and emotional states among early adulthood to early middle-aged women in Dearborn, Michigan. Through a cross-sectional survey involving 108 participants there is an aim to understand how dietary choices influence emotional well-being within this demographic. Administered anonymously using Qualtrics, the survey was distributed through links and QR codes in women's inclusive gyms and local coffee shops. Analysis of the survey data revealed the following results: 47% of participants reported consuming fast food, sugary snacks, or other ultra-processed foods 1-2 times a week. Commonly consumed snacks included potato chips (54%), cookies (44%), and cake & candy bars (32%), with 34% relying on pre-packaged convenience foods and frozen snacks multiple times weekly. Notably, 38% reported experiencing anxiety when consuming ultra-processed foods, with 61% perceiving a negative impact on overall emotional well-being. A correlation coefficient of +1 suggests a positive correlation between the consumption of ultra-processed foods and negative emotional states among early adulthood to early middle-aged women. With 33% of participants reporting anxiety and perceiving a negative impact on overall emotional well-being tied to their consumption of ultra-processed foods, higher consumption of these foods is associated with poorer emotions.

Poster: 45

1, 2 and You Don't Stop – The Value of DJs

Howard Mathis

Advisor: Dr. Jacob Frimenko

The art of scratch DJing, or turntablism, requires a keen ear and appreciation of music, an emotional connection to a crowd, a desire to influence people to leave their cares behind them, and desire to develop and grow as a DJ. With that growth comes value – emotional (via connection to listeners), professional, and financial. We looked to determine the value of DJs from their own perspective and the perspective of the end listener, to see the correlations between how DJs feel about the work they do and how the listeners feel by presenting both groups with surveys tailored to the individuals taking it. Our hope is to find the crucial link between the DJ and their crowd.

Poster: 46

Mental Health Screening in the Postpartum Woman

Reem Nasrallah

Advisor: Dr. Patricia Clark

Childbirth and the subsequent postpartum period are an exciting and special life experience for many women. However, it is also a time of great change, physically, mentally, and socially for mothers, infants, and families (Haran et al., 2014). Physical and psychological healthiness is changed leaving a profound impact on the quality of the mothers' lives, especially those of first-time mothers, and making this postnatal period, in a way, unbearable to them (Thabet et al., 2024). Postpartum depression (PPD) is one of the most common and severe postpartum morbidity, affecting 10%-20% of mothers within the first year of childbirth (Sudhanthar et al., 2019). Studies have found up to 50% of women with PPD go undiagnosed (Sudhanthar et al., 2019). This quality improvement project looks at two process indicators, 1. Moms to fill out the EPDS screening tool at the first post-partum visit, and 2. Provider will review the tool then as appropriate initiate a treatment plan. Twenty random medical records will be examined in a retrospective review looking for the results of first-time mothers between the ages of 28-40. The expected outcome will be to increase the recognition of PPD, and initiation of a treatment plan. The role of the advanced practice nurse practitioner (APRN) in this area will

be crucial to be able to take the time during the first post-partum visit not only to see how the mother is doing physically post labor but also mentally. The APRN role is known to be able to connect with patients different than other providers by taking more time with the patient during the visit to be able to connect.

Poster: 47

The Effects of Company Growth on Staff Morale

Joseph O'Donnell

Advisor: Dr. Jacob Frimenko

The purpose of this paper was to focus on assessing the impact that company growth has on staff morale. At Gift of Life Michigan, organizational growth has been a priority over the last few years, adding new positions across the departments in order to increase organ and tissue donation activity. This shift in positions and chain of command have resulted in changes that affect who employees report to, thereby understanding how these changes impact employee morale was this study's goal. A quantitative survey was sent to a total of 72 employees across three different job titles, in which the author received 41 responses. Independent variables of the research included whether the employee has had a change in manager, age, gender, and their educational background; measurable outcomes included job satisfaction, the feeling of opportunities for growth in the organization, and manager-employee relationships. Based on the results, overall scores for each measurable outcome was higher for employees that had no change in management across each dependent variable, indicating greater overall morale than those who had a manager change. However, there was no significant difference in the data for any of the components upon further data analysis. The author concludes that the organization should consider the effects of morale as it continues to grow. There is also an opportunity for the study to be conducted across the entirety of the organization as the study only covers a small portion of the organization.

Poster: 48

An Analysis of the Dimensions of Success for Adults Aged 18 – 65 – A Life Well Lived

Joshua Phillips

Advisor: Dr. Jacob Frimenko

What makes someone successful in life? The answer differs from person to person. For some, it is simply achieving their personal goals whether it is to have a family, be a parent, or check off their daily tasks. For others, it is about what they have, what they have earned, and what can be recognized by the general population such as: a sports car, a mansion, or a high-income job. Both are valid perceptions but is one more likely to lead to a life well lived? This paper investigates the different perceptions of success through a random sample of adults aged 18-65. This analysis is based on a correlation model, analyzing success, both internal and external, through a survey and then comparing the responses of all participants. To draw meaningful conclusions, age, gender, income, working status, and education will serve as independent variable drivers.

Poster: 49

The Investigation into the Well-Being and Mental Health of Student-Athletes Living On and Off Campus

Nick Pietras

Advisor: Dr. Jacob Frimenko

“The Investigation into the Well-Being and Mental Health of Student-Athletes Living on and off Campus” explored the influence of living arrangements on the well-being and mental health of student-athletes aged 18-23 at Madonna University. This study aimed to assess how residing on-campus versus off-campus impacts the living, social, and emotional well-being of student-athletes, employing the Young Adult Student Living Wellness Index, divided into living, social, and emotional well-being components. Through a secure and anonymous digital survey administered to 65 student-athletes, the research method sought to gather comprehensive insights despite an initial target of 150 participants. The achieved sample size resulted in a margin of error of 12.15% and a confidence level of 58%, areas identified for enhancements in future studies. The results indicated a significant difference in the living wellness component based on living arrangements. However,

when considering the entire Young Adult Student Living Wellness Index, which encompasses living, social, and emotional well-being, no significant overall difference was found between the student-athletes living on-campus and those off-campus. This conclusion underscores the complex relationship between living arrangements and specific dimensions of well-being, suggesting the presence of factors beyond living conditions that equally influence student-athletes’ mental health. The findings advocate for the development of focused support strategies that address the distinct needs related to living wellness, while also highlighting the importance of conducting larger-scale research to substantiate these preliminary observations.

Poster: 50

Disordered Eating: Comparison of Madonna Female Student-Athletes and Traditional Female Students

Abigail Powell

Advisor: Dr. Jacob Frimenko

Disordered eating incorporates a variety of irregular eating behaviors, habits, and attitudes. These symptoms can range from mild to severe and can be exacerbated by the pressure women face from society including possible coaches, teachers, or the media. The purpose of this study was to investigate the prevalence of Disordered Eating (DE) at Madonna University between traditional female students and female student-athletes to determine if female collegiate athletes are more likely to experience the symptoms of disordered eating compared to traditional students. A thirty-statement anonymous and self-reported survey was distributed to students. The survey included statements regarding certain behaviors, habits, and attitudes that are symptomatic of disordered eating. Furthermore, the survey contained statements to determine if social pressures do have an impact on the prevalence of DE. 128 responses were collected by various methods; 110 responses fit the correct demographic needed for this survey and were kept for data analysis. By identifying differences between the two groups, this study aims to bring light to the unique pressure and influence that young women face in society. All analysis and findings will be completed by April 30th, 2024.

Poster: 51

Positive Pandemic Fallout?: Exploring Evolving Mental Health Treatment Perspectives Post-COVID-19

Shane Rankin

Advisor: Dr. Kenneth Thiel

A burgeoning mental health crisis has manifested itself as part of the enduring aftermath of a global pandemic. The subsequent increased demand for psychological services has resulted in psychologists needing to explore more diverse treatment modalities, such as virtual and hybrid therapy. Currently, little is known about public perceptions regarding the efficacy of different treatment types, and how these perceptions affect an individual's openness to therapy. The purpose of the present study was to explore how attitudes and perspectives toward mental health therapy (MHT) may have changed during the COVID-19 pandemic. A Qualtrics survey was distributed across a variety of undergraduate courses at Madonna University. The survey asked respondents to reflect upon their pre- versus post-pandemic outlook on statements about MHT. The results revealed several significant post-pandemic trends, including increased perceived value of MHT, increased perceived need for mental health practitioners, and decreased stigma surrounding enrollment in MHT. In addition, there appears to be a post-pandemic increase in the perceived value of virtual and hybrid therapy, with a notable rise in openness to enroll in hybrid treatment. These findings confirm the growing importance and need for mental health services, and have important implications for mental health providers who are obligated to engage in evidence-based decisions in terms of what types of therapy to offer. As the mental health field continues to explore the growing interest in virtual and hybrid approaches, further research is needed to explore the long-term efficacy of these treatments in terms of patient recruitment, retention, and prognosis.

Poster: 52

An Analysis of the Impact of Electric Vehicles and Consumer Perceptions

John Rehm

Advisor: Dr. Jacob Frimenko

This study looks to understand the general perception of electric vehicles (EVs) among consumers as well as their overall impact on society. The focus of the literature review was to identify articles that

delved into the following three dependent variables: environment, infrastructure (power grid), and consumer perceptions. First, from an environmental perspective, this paper investigated just how environmentally friendly EVs are. This considered: the impact of sourcing raw materials, how green the energy supply chain is that produces the electricity, and the disposal of batteries at the end of life. The second theme was Infrastructure. Raw materials were reviewed with respect to availability and supply challenges, the pressure on the power grid, and the availability of charging stations. Finally, regarding consumer perception, this paper focused on articles that looked at consumer motivations for purchasing or not purchasing an EV. These motivations included protecting the environment, range anxiety, lack of charging stations, and upfront costs. As part of the research, a survey was also distributed to 157 participants to better gauge consumers' attitudes concerning the dependent variables: environment, infrastructure, and overall perception of EVs. This was cross-referenced with the demographic data of the survey participants. Significant findings were uncovered for perceptions based on education level, income, gender, and age. Preliminary results suggest that people with higher education were more concerned for the environment as well as consumers under 50. Women also showed more concern for the environment compared to men. As this project was being completed EV sales were stalling and consumers were acting on their lack of trust by not making EV purchases. Automobile manufacturers have not been able to break through the awareness barrier.

Poster: 53

Nursing Management of Pain and Dyspnea at End of Life

Kelly Roberts

Advisor: Dr. Vickie Gordon

End of life care is crucial part of nursing and greatly impacts patients and their families. As the age of the population increases, the global need for palliative care and end of life services are also rising (World Health Organization, 2020). Due to the aging population, the number of people that would benefit from palliative and end of life care is estimated to increase from 6.3 million in 2017 to 9.7 million in 2050 worldwide (OECD, 2021). Death and dying are aspects of patient care that all nurses will encounter during their career and therefore must have the knowledge to identify and manage symptoms such as pain and dyspnea. The American Nurses Association has recommended in a position statement that all nurses should have the skills to recognize and manage end of life symptoms such as pain,

dyspnea, anxiety, etc. (American Nurses Association, 2016). This quality improvement project will evaluate nurses' management of pain and dyspnea at end of life following the recommended ANA guideline. A retrospective chart review of twenty patients who have died in the cardiovascular intensive care unit (CVICU) will be selected at random to determine identification and treatment of pain and dyspnea. The process indicators include documentation of pain or dyspnea with associated treatment within thirty minutes. Control of symptoms is the outcome indicator. The data will be analyzed using descriptive statistics. The role of the advanced practice nurse will be discussed. Analysis and Interpretations are in progress and will be completed by April 30th.

Poster: 54

**Trends in Care for Older Adults:
Perspectives on Guardianship and Home
Health Placement**

Hannah Rothenberg

Advisor: Dr. Jacob Frimenko

This research project explores the perspectives of professionals with knowledge of guardianship and home health placement through experience in geriatric care and community outreach. Through seven interviews with professionals, including social workers, home health nurses, ombudsman, and others. Insights were gathered regarding considerations, factors often overlooked in accessing home health services, and how guardians can be better supported. The significance of this information lies in its potential to inform policy and practice in senior care within Michigan. By identifying key factors such as long-term care planning, emotional well-being, and quality of life, guardians can better navigate the process of selecting a placement that will meet the needs of the individual receiving services and the guardian. Additionally, the need for improved access to information regarding available resources and supports is highlighted, emphasizing the importance of training, education, and availability of resources for guardians to utilize. Through a thematic analysis of interview data, the research provided recommendations for improving support systems and decision-making processes for selecting living arrangements for older adults under guardianship. The following factors were analyzed to create indi-

vidualized care for the individual receiving care, as well as resources and support for guardians. By observing the knowledge of professionals, this study contributes to the ongoing dialogue to enhance the quality of life for older adults and their families.

Poster: 55

**Comparison of Processing Time for Open
Order Update Requests Between Manual
and Robotic Process Automation
Technology**

Ann-Maire Scott

Advisor: Dr. Jacob Frimenko

A comparison of processing time for Open Order update requests between manual and utilization of Robotic Process Automation (RPA BOT) technology. Supply backorders is one of the many challenges organizations supply chain experiences daily. For many organizations the process of following up on those supply backorders is an ongoing pain point. Delays of parts and supplies impact production, timelines, and competitive advantage. Within healthcare organizations the impact of backorders of critical medical supplies directly affects patient care. Managing backorders requires constant monitoring by procurement, the process is manual and repetitive, and relies on human labor to reach out to vendors for delivery updates on the needed supplies. Automation is one way to bring cost savings and process efficiencies to supply chains and utilizing Robotic Process Automation (RPA BOT) technology is a tool that can perform those repetitive, manual tasks significantly faster. This study performed a comparative analysis of processing time and tracked the manual time to compile and send an email request for open order status update and compared this to the processing time for an RPA BOT program to perform the same task. The sample size participants for this study were 20 which was the current number of employees performing this task. The data studied showed a significant decrease in processing time and the null hypothesis which stated that both the manual process and automated process were the same, was rejected. This quantitative study and supporting literature review showed that RPA BOT automation can replace those manual tasks, bring efficiencies to the process which allows the procurement staff to focus on strategic, value-added work.

Poster: 56**Analysis of Name, Image, and Likeness as a Predictor for Team Performance****Brandon Showers****Advisor: Dr. Jacob Frimenko**

The National Collegiate Athletic Association (NCAA) enacted a rule in 2021 that would change the landscape of college athletics forever. This was the ruling of name, image, and likeness (NIL). The NIL is a ruling that allows college athletes to be paid for their name, image, and likeness. This involves being able to be paid for commercials, brand deals, memorabilia, autographs, and anything else that a professional athlete could be paid for outside of their institution. This paper evaluates how the NIL has changed college athletics in terms of team wins based on their "team income" or how much collectively each team has made through the NIL through individual players income. This is a study that does not have much in terms of previous research as this is a recently new thing that has happened within the NCAA but has already had a major impact on college athletics. This study focuses particularly on BIG 10 collegiate football the three years prior to NIL (2017-2019) and the three years after NIL (2021-2023) by using a fitted regression analysis model.

Poster: 57**Going for the GOLD: Pharmacologic Management of Acute COPD Exacerbations in Hospitalized Patients****Joss Shrout****Advisor: Dr. Patricia Clark**

Chronic Obstructive Pulmonary Disease (COPD) is a group of diseases that causes airflow blockages and breathing-related problems that affects over 16 million Americans and is the 4th leading cause of death in the United States (U.S. Department of Health & Human Services, 2023). Acute exacerbations of COPD can be caused by viral infections, bacterial infections, environmental pollutants (Wedzicha & Seemungal, 2007), or no identifiable cause (Evensen, 2010). Patients with COPD can have an average of 1.3 exacerbations annually, with a 46% risk of death within 1 year after hospitalization (Evensen, 2010). Average length of stay for a hospitalized acute exacerbation is 7 days (Harries et al., 2015), in which the patient requires oxygen therapy, bronchodilators, cortico-

steroids, antibiotics, and noninvasive or invasive ventilation. This project looks at two process indicators: the appropriate use of antibiotics and the use of systemic corticosteroids in an acute exacerbation of COPD. Twenty random medical records will be examined in a retrospective review. Data analyzed using descriptive statistics. The length of stay for patients who receive five days of antibiotics and systemic corticosteroids on identification of acute exacerbation of COPD will be less than the benchmark of 7 days. The role of the APRN in management of the acute exacerbation COPD patient will be examined.

Poster: 58**Stabilizing Type B Aortic Dissection with Medical Management Guidelines****Lori Spangler****Advisor: Dr. Patricia Clark**

Aortic dissections (ADs) are a relatively rare, but potentially fatal condition. Progression of the AD with further tearing of the intimal layer can lead to complications requiring surgery or even death, with a 10% in-hospital mortality rate for uncomplicated type B dissections (Tolenaar et al., 2014). The highest risk patients are older (peak incidence 50 to 65 years), male, Black, or those with a hypertension history (Farber & Parodi, 2023). The 2022 American College of Cardiology and American Heart Association guidelines for diagnosis and management of aortic disease (Isselbacher et al., 2022) recommend that blood pressure (BP) and heart rate (HR) be tightly regulated on diagnosis of a type B AD to prevent progression of the dissection requiring surgical intervention. This quality improvement project evaluates compliance with evidence-based practice guidelines for initial medical management of type B AD intended to prevent progression of the AD requiring surgical intervention. Initial management recommendations include use of intravenous (IV) beta blockers (BBs), calcium channel blockers (CCBs), and vasodilators titrated to HR and SBP parameters as monitored by arterial line (Isselbacher et al., 2022). A retrospective chart review of twenty patients admitted for type B AD was completed. Process indicators include documentation of arterial line insertion within one hour of AD diagnosis by computed-tomography or magnetic resonance imaging and documentation of orders for IV BB, IV CCB, and/or IV vasodilators titrated to guideline HR and SPB parameters. The data is analyzed using descriptive statistics. The role of the advanced practice nurse is discussed.

Poster: 59

Vasospasm Management Post Aneurysmal Subarachnoid Hemorrhage

Lindsey Spooner

Advisor: Dr. Vickie Gordon

Aneurysmal subarachnoid hemorrhages (aSAH) constitute 75% to 85% of non-traumatic subarachnoid hemorrhage cases (D'Souza, 2015). Symptoms manifest abruptly and can be debilitating or even fatal. Prognosis hinges on factors such as the initial bleed volume, risk of rebleed, risk of vasospasm, and the extent of cerebral ischemia. A prevalent complication post-aSAH is cerebral vasospasm, leading to reduced arterial blood flow to the brain. If untreated, cerebral vasospasms may escalate to cerebral ischemia. Historically, medical treatment for vasospasms involved oral nimodipine, intravenous magnesium sulfate, and oral statin therapy. However, the 2023 guidelines from the American Heart Association reflect a shift. In alignment with recent studies, the guidelines no longer endorse the routine use of IV magnesium sulfate and statin therapy, citing their lack of efficacy in preventing vasospasm (Hoh et al., 2023). To assess guideline adherence in the medical management of cerebral vasospasm prevention, a retrospective chart review will be conducted on 20 adult patients, aged 18 years and older, admitted for aSAH. The review will focus on the presence and administration of intravenous magnesium sulfate and statin therapy. The study will encompass all genders, races, and ethnicities. Data analysis will employ descriptive statistics.

Poster: 60

Gender Disparities in the Recognition of Acute Myocardial Infarction

Rachel Stadler

Advisor: Dr. Vickie Gordon

Acute Coronary Syndrome (ACS) is one of the leading causes of death in the United States. Data from the Centers for Disease Control and Prevention indicate that between 2015 and 2018, 8.8 million Americans older than 20 years of age were diagnosed with acute myocardial infarction (AMI) (De Leon & Winokur, 2022). The clinical presentation of men and women is reported to be different presenting with AMI. Men are described as presenting with classic symptoms and women present with more atypical or noncardiac symptoms. This study looks at two process in-

dicators. The first indicator includes all patients with acute chest pain regardless of setting, an ECG should be required and reviewed for STEMI within 10 minutes of arrival. The second indicator includes all patients presenting to the ED with acute chest pain and suspected ACS, cardiac troponin should be measured as soon as possible after presentation. The method will consist of 20 medical records examined in a retrospective review. The expected outcome is the early recognition of MI. The data will be analyzed using descriptive statistics. The advanced practice registered nurse (APRN) are often the first provider to see these patients and should maintain a high index of suspicion as ACS can have diverse presentations patients (De Leon & Winokur, 2022). APRNs must observe the patient carefully and take age, ethnicity, sex and risk factors into consideration in their observation in order to prevent missed diagnoses and delays in treatment.

Poster: 61

Improving Obesity Management in a Primary Care Setting

Jana-Sofia Tremucha

Advisor: Dr. Patricia Clark

Obesity is a national and international public health crisis. Approximately 78 million adults in the United States are obese (Hamdy, 2023). The pathogenesis of obesity involves food intake and energy balance, genetics, lifestyle, as well as socio-economic and environmental factors (Lin & Li, 2021). Obesity is a progressive and chronic disease that puts individuals at risk for comorbidities, such as diabetes mellitus, hypertension, cardiovascular disease, and even death. An important component of obesity management is screening for diabetes. The management of obesity requires a long-term relationship between the patient and the provider. Priority goals of this population includes weight management and weight loss. The American Association of Clinical Endocrinologists in conjunction with the American College of Endocrinology (Garvey et al., 2016) recommends three modalities to treat obesity: lifestyle interventions, pharmacotherapy, and bariatric surgery. The importance of lifestyle interventions in particular will be emphasized. This quality improvement project will evaluate the adherence to obesity guidelines in a primary care setting. A retrospective chart review of twenty patients ages 25-45 years old with a BMI greater than or equal to 25 will be conducted. Process indicators will include documentation of weight loss treatment recommendations and diabetes screenings. The expected outcome indicator would be that patients with a BMI greater than or equal

to 25 will receive weight loss recommendations and a screening for diabetes. The data will be analyzed using descriptive statistics. The role of a primary care nurse practitioner will also be discussed.

Poster: 62

Massive Transfusion: The Use of ABC Scores and Predetermined Administration Ratios

Mallory Valdez

Advisor: Dr. Vickie Gordon

In trauma patients, hemorrhage is the primary cause of death, carrying a 50% mortality rate within the initial 24 hours. Even minor delays, as short as 10 minutes, in commencing resuscitation with blood products, escalate the likelihood of mortality within the first hour by 27% (Mains et al., 2023). Given the urgency in trauma cases involving rapid blood loss, swift identification of individuals requiring massive transfusion (MT) is paramount for timely and effective intervention. The American College of Surgeons in conjunction with the Trauma Quality Improvement Program have published best practice guidelines for MT in trauma patients. These guidelines make several recommendations including the use of a validated scoring tool to predict the need for MT and the use of the predetermined ratio of 1:1:1 (PRBCs: FFP: platelets) administration of blood products. This quality project will evaluate compliance with the Massive Transfusion in Trauma Guidelines (2014), specifically utilizing the validated Assessment of Blood Consumption (ABC) scoring tool to predict the need for an MT, and adherence to the recommended 1:1:1 ratio of blood product administration. A retrospective chart review of patients who meet inclusion criteria and received an MT for traumatic injuries will be performed. Process indicators include utilization and documentation of the ABC score prior to initiation of the MT and administration of blood products using a 1:1:1 ratio. Descriptive statistics will be utilized to summarize and describe essential information obtained from the data collected. Additionally, the role and integration of the advanced practice nurse within these processes and guidelines will be discussed.

Poster: 63

Evaluation of Chronic Obstructive Pulmonary Disease Management

Marissa Verran

Advisor: Dr. Patricia Clark

Chronic obstructive pulmonary disease (COPD) is a progressive, chronic inflammatory lung disease that is caused by an obstruction of airflow in the lungs. Symptoms includes cough, sputum production, and difficulty breathing (Mayo Clinic, 2020). Without proper COPD management, individuals are at a greater risk for complications. Complications that may arise include respiratory infections, cardiovascular disease, lung cancer, cerebrovascular disease, osteoporosis, depression / anxiety, obstructive sleep apnea, gastroesophageal reflux, and premature death (Mayo Clinic, 2020). According to the Centers for Disease Control and Prevention (2023), in 2021, an estimated 14.2 million of U.S adults were diagnosed with COPD (CDC, 2023). According to the American Lung Association (2023), 138,825 people died from COPD in 2021. COPD deaths are highest among men and Caucasians and lowest among women and Asians (ALA, 2023). With such staggering mortality rate numbers, it is imperative for APRN to properly manage a patient's COPD. Proper diagnosis, treatment and management can reduce a patient's number of exacerbations and hospitalizations and improve their overall quality of life. his project looks at two process indicators: In patients with COPD, appropriate pharmacotherapy is given based on the GOLD strategy's guidelines and flu vaccines are up to date. Twenty random medical records will be examined in a retrospective review. Data will be analyzed using descriptive statistics. The expected outcome is that patients with COPD are given appropriate pharmacotherapy and are up to date on their flu vaccine.

Poster: 64

The Linguistic Influence of English on the German Language: A Historical and Contemporary Perspective

Luisa Wiewgorra

Advisor: Dr. Jacob Frimenko

The influence of English on the German language has been analyzed by linguists for decades. While many have studied the number of anglicisms in the German language and some have advocated for the preservation of a "pure" language, others have looked at the perception of German natives. This research analyzed the

perception of 248 German natives on the influence of English on the German language. A survey examined the impact of age, English skills, and location of upbringing with a focus on East and West Germany. The survey analysis has shown that German natives who rated themselves having high English skills are more sensitive to the perception of the influence and have a more positive perception in contrast to German natives with low English skills. A person's English skills could be determined as the main influencing factor, which also varies with age and the location of upbringing. Younger German natives and those who grew up in West Germany have better English skills than older German natives and those who grew up in East Germany. Further research could aim at determining the reasons for variance in English skills and examine a broader demographic, allowing for more extensive insights.

Poster: 65

The Emotional Intelligence of Leaders and Their Followers' Performance and Productivity

Niketa Woodley

Advisor: Dr. Jacob Frimenko

In many workplace environments there is a disconnect between value and performance, emotional intelligence, and productivity. In high sales environments meaningful leader-follower relationships can become purely transactional. You do this, I do that type of interaction. Thus, many employees are not finding value in their respective roles outside of what they produce. It's generally true that most people can produce anywhere, in any environment, however, the level of productivity and employee commitment to performance depends a great deal on the value placed on their contributions. This value ultimately must come from their leadership.

Poster: 66

CQI: Adherence to Asthma Management Guidelines

Agnieszka Zakoscielna

Advisor: Dr. Patricia Clark

Asthma affects more than a quarter of a billion people worldwide and is responsible for over 1000 deaths a day, of which the majority are preventable (Levy et al., 2022). As one of the most common respiratory

diseases in the world today, asthma prevalence is expected to increase to 400 million by 2025. Asthma is a major cause of disability, health care use, and poor quality of life. Patient burden from exacerbations and daily asthma symptoms has increased by about 30% in the past 20 years and is expected to increase further as more countries urbanize. This means that the economic impact of asthma is also expected to increase and includes direct costs such as medications or urgent care use, as well as indirect costs, such as missed work or school, and decreased quality of life (GINA 2021). Asthma prevention and appropriate treatment, therefore, are of utmost importance. This project looks at three process indicators: all adolescent and adult patients will receive ICS-containing treatment, as-needed SABA therapy alone will not be used in asthma patients, and asthma stage will be charted on all patients. Twenty random medical records will be examined in a retrospective review. Data will be analyzed using descriptive statistics. The expected outcome is that patients with asthma are prescribed medications according to the Global Initiative for Asthma (GINA).

Poster: 67

Best Practices for TAVR Optimization

Katherine Rice

Advisor: Dr. Vickie Gordon

Transcatheter aortic valve replacement (TAVR) is a new and transformational technology for patients with severe aortic valvular stenosis. TAVR is currently approved for use in patients with severe symptomatic aortic stenosis (AS) who are at intermediate to high surgical risk or are inoperable. Since the first U.S. Food and Drug Administration approval in 2011, over 50,000 patients have undergone TAVR in the United States alone. (Otto et al., 2017). The American College of Cardiology established an expert consensus consortium to develop a decision pathway for transcatheter aortic valve replacement in managing adults with aortic stenosis. The consortium recommends MSCT/CTA and Echocardiogram to obtain precise measurements of aortic valves. The current gold standard method for valve measurements and preprocedural TAVR planning is the multi-detector computed angiogram (MDCT) (Saadi et al., 2022). This chart review will evaluate compliance with evidence-based guidelines and best practices for TAVR. A retrospective chart review of twenty patients qualified for TAVR will be completed. Process indicators will include orders and results of CTA and Echo

pre-procedure. The data will be evaluated using descriptive statistics. The role of the APRN in the pre-procedure workup of TAVR patients will be discussed.

Faculty Posters

Poster: 68

Reducing Test Anxiety in Undergraduate Nursing Students: DNP Evidence Based Practice Project

Dr. Jennifer McConnell

Advisor: Dr. Dawn Goldstein

Mental health issues are prevalent among undergraduate nursing students and can adversely affect their academic and clinical performance. Test anxiety is one of the most common mental health issues that nursing students experience, especially before taking high-stakes exams. The American College Health Association (ACHA) conducted the National College Health Assessment 2020 at a private university in southeastern Michigan and found that 46.5 percent of the 383 respondents reported that anxiety negatively impacted their academic performance within the last 12 months.

A literature review and synthesis of existing interventions to reduce test anxiety among nursing students revealed three main themes: psychological, physiological, and social interventions. Although much of the evidence from these categories showed an improvement in test anxiety, aromatherapy studies had higher levels of evidence than other interventions in the literature review, indicating aromatherapy to be the best evidence-based practice intervention for this population.

The project evaluated a 15-minute aromatherapy intervention on undergraduate nursing students' test anxiety. Lemon essential oil was applied to the hands and wrists of students and inhaled periodically prior to an exam. Pre-and post-intervention survey data was collected (n=9) using the Hamilton Anxiety Rating Scale (HAM-A). This survey measured both psychic anxiety (such as worries, fears, and depressed mood) and somatic anxiety (such as insomnia, muscular tension, and palpitations) students were experiencing before and after the intervention one hour prior to taking a

proctored exam for their nursing course.

The mean composite score of the pre-survey was 15.56 while the postsurvey was 8.89. Given the statistically significant p-value and the disparity in mean composite scores, it appears plausible that the incorporation of aromatherapy may have effectively alleviated test-related anxiety within this cohort of undergraduate nursing students. Based on the outcomes, it is recommended that aromatherapy be considered as a viable option to explore when addressing test anxiety in the educational curriculum of undergraduate nursing students.

Symposium for Research, Scholarship and Creativity Awards

College of Arts and Sciences

Science and Mathematics Research Award

Rachel Austin – Undergraduate Student, Forensics

Rachel Crachiola – Undergraduate Student, Nutrition and Dietetics

School of Business

Michael F. McManus Jr. Award for Leadership and Scholarship

Mia Wolfbauer – Undergraduate Recipient

John Rehm – Graduate Recipient

College of Education and Human Development

Learning Outcome Assessment Project (LOAP) Award

Carolyn Ferraiuolo

Danielle Sargent

National Association of Social Work – Michigan Chapter Awards

Social Work Student Of The Year

BSW Award – Sara Pitchford

MSW Award – Melody Montgomery

College of Nursing and Health

Fulbright Scholar

Dr. Roxanne Roth

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Karen Obsniuk
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