

MADONNA UNIVERSITY CENTER FOR RESEARCH PRESENTS

Symposium for Research, Scholarship and Creativity

**Wednesday, April 17, 2019 • 12–5 p.m.
Franciscan Center Gathering Space**

DIRECTOR'S WELCOME MESSAGE

5th Annual Symposium for Research, Scholarship and Creativity



*The Madonna University **Annual Symposium for Research, Scholarship and Creativity** proudly serves all disciplines providing students and faculty with an amazing opportunity to showcase scholarly accomplishments in research, practice, performance and creativity with the University and greater community.*

*Established in 2015, the annual symposium grew out of an earlier **Center for Research** recognition event, fondly known as Research Day – Celebrating Our Research Endeavors!*

The annual Symposium for Research, Scholarship and Creativity is one of the key activities the Center for Research coordinates to promote quality research practices, scholarship, and creative endeavors. Through this event, students are provided an opportunity to share innovative ideas, culminating capstone research, project work, artistic expression, creative performances and many other forms

of scholarship. In addition, the event includes an **Academic Awards** ceremony and featured **Madonna Talks**, providing a venue for recognition of students' outstanding achievements and a fast-paced update on faculty 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 building capacity to serve others and contribute to the greater good.

I invite you to explore the scholarly and creative achievements and endeavors of the students and faculty presented at our 5th Annual Symposium for Research, Scholarship and Creativity.

A handwritten signature in black ink that reads "Dr. Deborah Dunn". The script is fluid and cursive.

Dr. Deborah Dunn
Professor
Director Center for Research
Dean, The Graduate School

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- 23** Student Recognition Awards
- 24** Institutional Review Board
Poster Presentation Judges

SCHEDULE OF EVENTS

12 p.m.	Welcome Address	S100 - Franciscan Center
	Musical Performance	Shacai Pittman
	President Address	Dr. Michael Grandillo
	Research at Madonna	Dr. Deborah Dunn
	Student Recognition Ceremony Address	Dr. Jim O'Neill
	College of Arts and Humanities	Dr. Kevin Eyster
	School of Business	Dr. Deborah Dunn
	College of Education	Dr. Karen Obsniuk
	College of Natural and Social Sciences	Dr. Karen Ross
	College of Nursing and Health	Dr. Judith McKenna
12:55 p.m.	End of Student Recognition Ceremony	Dr. Deborah Dunn
1 p.m.	Poster Presentations Open	Franciscan Gathering Space
1:30 p.m. - 3:30 p.m.	Ford Community Corps Poster Presentations	1403 - Main Academic Building
2-3 p.m.	Madonna Talks	S100 – Franciscan Center
3 p.m.	Refreshments and Networking	Franciscan Gathering Space
4 p.m.	Award Ceremony	Franciscan Gathering Space

MADONNA TALKS

Impacting Frailty – A wholistic review

Frailty is a complex syndrome that affects millions of older adults in the United States. Data shows that older adults who are frail are 3 to 5 times more susceptible to adverse health events. Early identification of frailty provides the opportunity to improve patients' physical, functional, and psychosocial well-being and to lengthen the amount of time older adults are able to experience robust health and independent living. In this brief session, we will explore wholistic frailty assessment, treatment and management of the individual, as well as implications for social, public health, and health systems improvements.



Denise Brothers, PhD
Assistant Professor and Director,
Aging Studies Program
Political and Social Sciences Department



Deborah Dunn, EdD, MSN, GNP-BC, ACNS-BC, GS-C Professor
Dean, The Graduate School
Director, Center for Research



Sue Anne Sweeney, MPH, MA
Assistant Professor, Aging Studies Program
Political and Social Sciences Department

Human geography, DeafSpace, and the role of sign language interpreters

Sign language interpreters are far from “neutral” — although they seek to facilitate communication without bias or favor, their very presence in a setting changes the meaning that is created in an interpreted event. This presentation will review recent research into the overlap between human geography and sign language interpreters. Using interpreted theatre as an exemplar, we will explore how the placement of sign language interpreters in the theatre ultimately influences meaning for the hearing and Deaf people present. The resulting understanding of embodied language and interpreter placement can be applied to other interpreted situations, such as health care, legal, and academic settings.



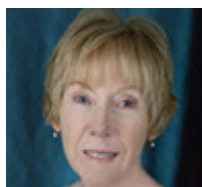
Daniel McDougall, CSC
Associate Professor and Chair
Sign Language Studies

Formative and Summative Testing Strategies

This forum will examine two unique testing strategies currently being used in the graduate nursing programs at Madonna University. The testing strategies presented will highlight both formative and summative evaluations. Feedback Assessment Testing (IF-AT) is used within a variety of courses and is an example of formative evaluation. This type of testing allows both faculty and students to evaluate student knowledge and pre-course preparation related to specific course content. Summative testing includes a collaborative comprehensive group exam that is offered at the end of the program. This comprehensive group exam is fashioned after the certification exam that students are required to take in order to become employed as a nurse practitioner. Multiple year analysis of student perception and outcomes will be presented.



Tracey Chan RN, MSN, PhD
Assistant Professor
Nurse Practitioner Program Director
College of Nursing and Health



Patricia Clark, RN, MSN, DNP, ACNP BC
Associate Professor, Lead Acute Care NP Faculty
College of Nursing and Health



Gail Lis RN, MSN, DNP, ACNP-BC
Professor
Graduate Chair, College of Nursing and Health

POSTER PRESENTATIONS

Undergraduate

Poster Number: 1
Chocolate Chip Cookies with Avocado as Fat Substitute
Maryam Akhdar
Advisor: Laura Freeland Kull

Avocado is a fruit rich in monounsaturated fatty acids that provides various health benefits and contains high levels of antioxidants including polyphenols, tocopherols and carotenoids. Avocados naturally have a buttery texture, making it a good alternative to other fats. The use of avocado as a fat replacer will ensure that baked products are healthier by adding nutritional benefits while decreasing the amounts of trans fatty acids and saturated fatty acids. This study was done to test characteristics of chocolate chip cookies with the use of different percentages of avocado puree as a fat substitute in replacement to butter. Four different batches of chocolate chip cookies were made, batch 1 being the control containing 100% butter, batch 2 containing 25% avocado pulp and 75% butter, batch 3 containing 50% avocado pulp and 50% butter, batch 4 containing 75% avocado pulp and 25% butter. Volume and diameter were examined to evaluate exterior properties and a sensory panel was conducted to assess chewiness and sweetness of chocolate chip cookies. The results showed that volume and diameter decreased with a higher percentage of avocado puree. Batch 4 which was the 75% avocado puree and 25% butter had the lowest volume and lowest diameter. From the sensory evaluation, the results showed that batch 3 was most chewy, batch 1 was the sweetest and batch 4 was the least sweet. This research suggests that avocado can be used as a successful fat replacer in baked products.

Poster Number: 2
Mathematics and Rocket Propulsion Developments
Jose Bonilla
Advisor: Dr. Susan Toma

This project consists of research on electric propulsion systems for space travel. Also, it covers the applications of mathematics in these propulsion systems and models the important equations and behind the engineering. It describes the important parameters that play a role in efficient propulsion systems, and the latest research in the engineering.

Poster Number: 3
Using Taro Flour as a Partial Substitute of Wheat Flour in the Production of White Chocolate Chip Cookies
Alyssa Buffa
Advisor: Laura Freeland Kull

Incorporation of taro flour in place of wheat flour would lead to a reduction of cost in baked goods in parts of the world where wheat is not produced. Where wheat is produced, taro flour would be an ideal substitute of wheat flour for consumers that are gluten-

free or grain-free. This study investigated the effects of using taro flour as partial substitution of wheat flour in white chocolate chip cookies. Substitution levels were at 25 and 75%. The objective evaluation revealed a decrease in diameter and an increase in height and volume as the ratio of taro to wheat flour increased. Sensory evaluations determined that amount of taro flour to grittiness were directly proportional and taro flour to overall acceptability were indirectly proportional. Results showed that substitution of wheat flour with taro flour up to 25% produce white chocolate chip cookies similar to the control. In some attributes, the panelists scores for the composite cookie were comparable to the control. Although cookies made with 100% wheat flour were ranked as least gritty, the taro-supplemented cookies produced desirable scores for overall acceptability. Cookies made with 25% taro flour scored a 4.4 on the hedonic scale for overall acceptability, while the panelists scored the control cookie a 4.5. It could be concluded that the substitution of wheat flour with taro flour up to 25% would be accepted by consumers.

Poster Number: 4
Gene Disruption in *Drosophila Melanogaster* using CRISPR Genome Editing Techniques
John Carzon, Nicholas Booth, and Nicholas Lavin
Advisor: Dr. Jodi Lynn Barta

CRISPR-Cas9 is a genetic engineering technique that was developed from an immune response system found in prokaryotes and archaea. More recent research has resulted in the successful implementation of genome modification through CRISPR technology in eukaryotic organisms such as *Drosophila melanogaster* and even humans. The genome engineering modifications commonly used include gene knock-out, which disrupts gene function, or donor insertion, which aims to restore proper function of a gene. The goal of this experiment was to knock-out the function of the yellow gene, which codes for dark pigmentation in the *Drosophila* body. This was accomplished by injecting a plasmid construct including Cas9 and guide RNA (gRNA) expression vectors. The Cas9 protein combined with the gRNA were expected to instigate a cut and subsequent non-homologous end joining repair (NHEJ) in the second exon of the yellow gene resulting in the loss of body color in the fruit flies. The presence of the expected mutation was investigated by Polymerase Chain Reaction (PCR) of the target region. Sequencing of PCR products is currently being conducted to verify the alteration to the genome. Future research will include attempts to insert a donor green fluorescent protein (GFP) into the second exon cut site in the yellow gene fluorescent green-bodied flies.

Poster Number: 5
The Effects of Different Dairy Substitutions have on Viscosity and Sensory Characteristics of White Alfredo Sauce

Suzanne Gutowski
Advisor: Laura Freeland Kull

Coconut milk and almond milk are both dairy free alternatives. Coconut and almond milk varieties are typically lower in fat and provide significant amounts of Vitamin E, magnesium, and fiber to the human diet. The substitution of dairy products is a growing trend within the past years for many reasons. Allergens, sensitivities, personal preference, or taste can cause an individual to use dairy free substitutes in cooking, baking, or as a beverage. Within the experiment, coconut milk and almond milk were fully replaced with heavy whipping cream in the preparation of white alfredo pasta sauce. Measurements of viscosity of the three different samples were performed by a line spread and consistometer test. Sensory evaluations were presented to an eight-member panel to evaluate odor, thickness, flavor, aftertaste, and texture of each sauce. The sauce characteristics were compared using a descriptive scale scorecard to rate each item. Each of the sauces were rated on a preference scale from #1 being most preferred to #3 being least preferred. The results showed that the white alfredo sauces prepared with coconut milk was the most preferred and the almond milk sauce was the least preferred of the panel. The acceptability of the coconut milk shown in the sensory evaluations proved that dairy free alternatives could be suitable for cooking.

Poster Number: 6
Applications of Group Theory in High School

Jonathan Harris
Advisor: Dr. Susan Toma

Mathematical concepts have a wide berth of influence and application inside and outside of the world of mathematics itself. Group theory, presented and analyzed herein, examines the relationships between numbers and sets of numbers. These relationships solidify an understanding of the distances between numbers, and how similar sets of numbers are defined through operation-based properties. Students often struggle with the algebraic concepts presented in moderate level algebra and early calculus courses, such as plotting the transformations of parametric functions, or recognizing transformations of trigonometric functions due to integration or derivation. Understanding that these groups of functions maintain a sense of group structure, interrelation between the two has the potential to become fluid. An inadequate understanding of these concepts and attempting rote memorization of their relations not only inhibits the overall knowledge of an individual, but also serves as a potential driving factor in the development of math anxiety. Loosely defined as the tension and anxiety that prevent solving problems in academic situations, or otherwise, math anxiety can cause the deterioration of self-confidence, as well as an objectively poorer performance in math. Theories show how effective higher level concepts in mathematics can be when attempting to establish a stronger foundation of number sense in secondary and post-secondary students. Gathering the results of various assessments, this essay contains an experimental design that will consider the effects of

focusing on group theory principles to increase the breadth of understanding for secondary and post-secondary mathematicians.

Poster Number: 7
Predictable Objects: The Dragon Tail Sequence and the Geometry of Predictable Sets

David Hunter
Advisor: Dr. Susan Toma

The focus of this research topic is to define a method for predicting a sequence of scalar, nonnumeric objects such as sets, shapes or other grouped objects using mathematical concepts. The observations made from the research done on the geometric structure known as Point-Reach, N.I.T. (Nodal Impact Trajectory), or its zoomorphic name the Dragon-Tail sequence, are quite salient in the formation of a predictive formula for the n th object. Each object in the sequence is a group or set of discrete elements of finite number. Each object's capacity determined by its placement or enumerated location in the list of objects. This means that each set or group is numbered chronologically, and that position value determines the objects magnitude or size (i.e. the number of elements each set contains). The problem of predicting a nonnumeric objects, in relation to this problem, involves listing the components of any set in the geometry.

Poster Number: 8
Rubik's Cube: The Mystery Revealed

Erin Jobst
Advisor: Dr. Susan Toma

Rubik's cube has become the world's best selling toy since its production in 1974. It has also been used by mathematicians in the field of group theory. A look into groups, permutations, symmetry, and "God's number" reveal the mystery behind solving Rubik's cube.

Poster Number: 9
Characteristics of Cupcakes Prepared with Rice Starch and the Reduction of Saturated Fat When Used in Place of Butter

Olivia Kitz
Advisor: Laura Freeland Kull

In today's society, both consumers and producers have placed a demand for reduced fat and/or reduced-calories foods. Consumers are learning how different foods may oppose a variety of health-related risks, such as obesity and diabetes (1). Many types of starches have successfully provided the same characteristics as fat in baked products. The purpose of the research was to determine if rice starch could be used as a fat replacer in cupcakes. In this experiment, butter was replaced with rice starch at 20%, 30%, and 50% of total fat in the recipe for cupcakes. Objective tests were completed to determine change in the height, volume, and viscosity of the batter. First, a seed displacement test was performed and height in centimeters was recorded for each substitution. Second, a line-spread test was conducted to measure the viscosity of the cupcake batter. No significant difference was found between the control and each substitution. A panel of test subjects completed three subjective tests to determine consumer acceptability and

moistness. Results showed that panelists preferred the control cupcake, with 20% and 30% rice starch substitution rating high in panelist preference. Based on this research, it can be concluded that rice starch is a suitable partial-substitute for a reduced-fat option in cupcakes.

Poster Number: 10
Something to Chew On: A Potential Jaw Clenching Technique to Reduce Stress

Madelyn Klebba

Advisor: Dr. Kenneth Thiel

College is a stressful period of life for many individuals. The debilitating effects of test-taking anxiety can harm academic performance and exacerbate the overall stressful experience. The aim of the present study is to explore a novel anxiety-reduction technique for test-taking. Specifically, I hypothesize that engaging in a jaw-clenching exercise while taking a test will alleviate the physiological and psychological correlates of stress, while also improving performance. Twenty undergraduate students from Madonna University were randomly assigned into two groups – an Intervention group in which participants were asked to insert a “Chewy Tube” into their mouth and clench on it while completing select subtests (i.e., digit span, symbol digit coding and arithmetic subtests) from the Wechsler Adult Intelligence Scale (WAIS), and a Control group in which participants completed the WAIS without being asked to chew on anything. Both groups were also administered the Beck Anxiety and Zung Self-Rating Anxiety Scales, and they had their heart rate and blood pressure monitored throughout testing. The results suggest that engaging in a jaw clenching exercise while taking a cognitive assessment test does not reduce physiological or psychological indices of anxiety, nor does it improve performance. Although these findings were contrary to expectation, several limitations of the research design may preclude a definitive conclusion that jaw-clenching is ineffective. For instance, the subset of tests taken from the WAIS may not have elicited a strong stress response to begin with. Additional limitations will be discussed such as how stress was measured. Nevertheless, this study highlights the continued importance of examining new alternative to combat the effects of stress on test-taking performance among college students.

Poster Number: 11
Geriatric Emergency Department Guidelines to Address Depression in the Older Adult

Sarah Knapp

Advisor: Dr. Carly Nowicki

Depression is a prevalent mental health condition affecting the older adult population. Unfortunately, less than 50% of depressed older adults receive a correct diagnosis and adequate treatment. As there is an increase in mental health related visits to the emergency department (ED) among the older adult population, a geriatric depression screening in the ED is vital because of the EDs unique position between inpatient and outpatient care. Currently, a geriatric depression screening is not required in the Geriatric Emergency Department Guidelines. This study, conducted within St. Mary Mercy Hospital (SMMH) in Livonia, determined the effectiveness of a geriatric depression screening in identifying

possible depression in patients 65+ admitted to the geriatric ED. The Geriatric Depression Scale- 5 (GDS-5) was used to determine patients positive for possible depression at SMMH between November 2017 and September 2018. Of the positive patients (n = 486), the majority were female (p < 0.001), did not have a caretaker, and were living at home. Of the patients admitted to the ED from a senior living facility (n = 77), over half came from an independent living facility (ILF). A significant number of positive patients were living in environments receiving minimal care (home or ILF) in comparison to the patients receiving care in more advanced nursing and living facilities (p = 0.004). Furthermore, almost a quarter of positive patients exhibited possible suicidal ideation identified by the Columbia-Suicide Severity Rating Scale. This study demonstrated the importance of the GDS-5 in identifying possible depression among older adults in a geriatric ED and how sex, living environment, and suicidal ideation can contribute to a positive score. A geriatric depression screening is needed in the Geriatric Emergency Department Guidelines to improve the quality of life of older adults nationwide.

Poster Number: 12
The Evolution of Geometry as it Pertains to Parallelism

Catilyn Lefebvre

Advisor: Dr. Susan Toma

Euclidean Geometry possesses the majority of the popularity and familiarity in the broader subject of geometry despite its flaws and lack of evidence. It has been the staple of geometry since 300 B.C. However, Euclidean Geometry only holds true in a limited amount of situations – the main being two-dimensional spaces. For thousands of years though, it was believed to hold true in all situations despite its multiple occurrences of lack of evidence. One of the geometry’s biggest errors was within Euclid’s fifth postulate which loosely defined parallelism. It specifically went unproved for over 2000 years before it was successfully challenged. Eventually a few brave mathematicians such as Gauss, Lobachevski, and Bolyai risked their careers to prove the contradictions within the parallelism postulate. When they found that Euclidean parallelism was in fact unprovable, non-Euclidean geometry was discovered. It turned out that there were several different geometries that were non-Euclidean that could be used to explain the different spaces and worlds within the universe. It was discovered that only being able to understand two-dimensional spaces was no longer sufficient enough knowledge. Hyperbolic Geometry, one of the more popular types of non-Euclidean geometry, was discovered directly through the negation of Euclidean parallelism. Its models that explain non-Euclidean parallelism include the Klein model, the Poincare Disc model, and the Upper Half Plane model. They each provide visual representations that aid in understanding non-Euclidean geometry despite the default Euclidean-way-of-thinking that so many people still understandably possess.

Poster Number: 13
The Gelling Properties of Chia Seed in Yellow Cake
Victoria Nunley
Advisor: Laura Freeland Kull

When gelled, Chia seed has strong binding properties and therefore can be utilized as an egg replacement in baked goods suitable for individuals with egg allergies. To properly determine how Chia seed's gelling properties affects the objective and sensory properties of the cake research must be done. The purpose of this was to determine if Chia seed gel is a viable replacement for eggs in cake compared to whole eggs and commercial egg replacers. A control cake with whole eggs was used as well as a cake with Ener-G powdered egg replacement for comparison. A basic yellow cake recipe was used that required three whole eggs, approximately 180mL of egg liquid (control batch), powdered egg replacer or chia seed gel. To study the sensory characteristics of cake, a panel of nine individuals participated in rating the cake's tenderness, mouthfeel, color and flavor. Results from the panelists were added and the mean was reported for each characteristic. Results indicated that the whole egg cake was most favored in each characteristic and overall. Chia seed cake was preferred over the egg replacer cake in tenderness, color and flavor. The mouthfeel of the cake was more preferred in the egg replacer cake than in the chia seed cake. The height was taken of three different samples from each cake with the mean recorded. The result of the mean height was favorable again for the control cake with the most rise, while the chia seed cake had the lowest score. This study demonstrated that chia seed gel can successfully replace whole eggs as an alternative to packaged egg replacer; however, is still not as favorable as whole eggs in cake.

Poster Number: 14
Exploring Public Opinion on Gene-Editing: Awareness or Confusion?
Marisha Potter
Advisor: Dr. Jodi Lynn Barta

The rapid advances in gene editing and worldwide acknowledgement of CRISPR-Cas9 as a technological milestone make the question of public awareness and perceptions of practice important to understand. Not only must scientists and researchers know the strengths and limits to this technology but so must the public. Gene modification or enhancement has the potential to affect entire populations (not just the human population). Since its discovery CRISPR has opened up the door of possibilities for cancer therapy and disease prevention. But how much does the public know? Before there can be ethical advancement in the use of this technology, there must first be concerted efforts made to educate and gain knowledge of the public's opinion on the matter. According to a survey conducted, the public actually knows very little. The opinion of the public is affected by what information is provided, what knowledge the public has gained from academic pursuits, independent investigation, or media consumption, and what ethical positions individuals take. When provided with a brief description of what CRISPR-Cas9 can do, a

majority of the population agrees with advancements for the purpose of therapy in humans, yet many believe that it is not appropriate to use this technology on animals. It becomes obvious that there is still much to learn and consider when discussing advancements in gene editing for modification or enhancement purposes in humans and other organisms.

Poster Number: 15
Using Macroinvertebrates to Evaluate Freshwater Stream and Pond Health
Christopher Raymond
Advisor: Dr. Veronica Riha

Madonna University's freshwater ponds and streams were evaluated using macroinvertebrates. Data collection involved 6 bags placed in 4 different freshwater sources over a period of 8 weeks. 67 individual macroinvertebrates were collected and used in the Biotic Index calculation, providing an overall health of range between 3.2 and 3.8, indicating low levels of organic pollution. It was concluded that Madonna University's ephemeral streams and ponds likely had good quality health and low levels of pollution during the spring season of 2018.

Poster Number: 16
Exploring Biological Continuity in Pre-Contact Puebloan Populations Using Ancient DNA and Canid Remains
Jessica Sykes
Advisor: Dr. Jodi Lynn Barta

For the past 20 years, the Cañada Alamosa Project has explored the last 2000 years of the human occupation and migration history of an isolated Rio Alamosa canyon in southwestern New Mexico. A key research question of the Cañada Alamosa Project is whether or not the same biological population inhabited the sequence of prehistoric archaeological sites found on the Rio Alamosa or were they repeatedly occupied and abandoned by a variety of culturally different groups. Establishing a human biological continuity is difficult due to restrictions on sampling human remains. A less controversial approach is to study patterns of genetic variation among domesticated animals that belonged to the human populations in question. For this study, mitochondrial DNA (mtDNA) was extracted, amplified, and sequenced from canid remains recovered from two Cañada Alamosa archaeological sites, the Victorio Site (1200 – 1280 BCE), and Pinnacle Ruin (1250 – 1300 BCE). Preliminary results indicate an interesting genetic signature is present in the remains recovered from the sites, and that they were strikingly different in mitochondrial origin. The Victorio dogs showed no genetic diversity with all four individuals displaying the same mitochondrial haplotype. In contrast, the six individuals sampled from Pinnacle Ruin represent one dog, one raccoon, and four canids showing three different coyote mtDNA genetic signatures; it is unclear whether these were wild coyotes or domesticated hybrid animals. Future research will continue to explore these questions through analysis of additional individuals from each of the sites along with samples obtain from two other sites in the region.

Post Number: 17
Mathematical Mindset: The Importance of Teacher Mindset When Learning Mathematics
Rebecca Wassom
Advisor: Marcilyn Poppema

Mindset theories have become a rising topic of discussion throughout the education system. Individuals can be classified into two mindset categories- fixed or growth mindset. The differences between the two approaches revolve around the idea of the malleability of intelligence. Jo Boaler expands upon the idea of mindset to include mathematical mindset, which looks at an individual's beliefs about mathematical intelligence. This study examines the perceived, portrayed, and mathematical mindsets of teachers. A four-part survey was sent via email to principals and leaders within 133 schools in Michigan and shared on social media websites. 107 responses were received with 87 completed responses serving as the sample for the study. Of the 87 responses, 19% of participants demonstrated a strong growth mindset, 76% demonstrated a growth mindset with some fixed ideas, 5% demonstrated a fixed mindset with some growth ideas, and 0% demonstrated a strong fixed mindset based upon the initial mindset survey. A 13% decrease was observed in the number of participants portraying a growth mindset in the classroom. As a result, there was a 13% increase in the number of participants portraying a fixed mindset. When examining the mathematical mindset of teachers, 95% of participants are characterized as having a growth mindset approach. The portrayed and perceived mindsets held by teachers can influence a student's learning process and beliefs about mathematics. As more information is collected regarding the mathematical mindset of teachers, growth mindset strategies can be further implemented by teachers to increase student success in mathematics.

Poster Number: 18
The Effects of Almond Flour Substituted in All-Purpose Flour Biscuits
Lauren Zuhlke
Advisor: Laura Freeland Kull

Almonds are rich in healthy fat, vitamins, minerals, and have been used to fortify foods that are typically low in protein.¹ Flour can be milled from blanched (with skin removed) or unblanched almonds and can further be used as a gluten-free source in baked goods. Studies have shown that almond flour can be used when mixed with coconut flour and wheat to make biscuits,¹ and can be used in combination with iron to make fortified, gluten-free cookies.² The objectives of this study were to assess the volume and height of almond flour biscuits against a control using an all-purpose flour biscuit recipe and to determine which biscuit variation was the softest and most preferred by a sensory panel after baking, freezing, and thawing under refrigeration. There were four biscuit ratios tested, which included 100% all-purpose flour (control); 75% all-purpose flour/25% almond flour; 50% all-purpose flour/50% almond flour; and 100% almond flour. Overall, the results from this study concluded that the control had both the highest volume and rise after baking. However, the 75% all-purpose flour/25% almond flour biscuit scored the highest in preference, and both the 75% all-purpose flour/25% almond flour and 100% almond flour

scored the highest in softness. This study proved the potential use of almond flour-based products in gluten-free biscuit and bread manufacturing and demonstrated a positive outcome in food fortification and consumer product demand for individuals with a gluten intolerance.

Graduate

Poster Number: 19
Diastolic Heart Failure
Terry Allen, Karie Llewellyn, and Monika Malysa-Houben
Advisor: Dr. Claude Lauderbach

The American College of Cardiology (2017) and American Heart Association (2017) have established guidelines for use in primary and acute care practice for pharmacologic treatment for blood pressure control in patients with various stages of heart failure. In patients with preserved ejection fraction, these guidelines include the use of beta-blockers agents, angiotensin converting enzyme-inhibitors (ACE-I), and angiotensin receptor blocker (ARB) for management of hypertension. This quality improvement project examines adherence to best practice guidelines for heart failure preserved ejection fraction (HFpEF) in patients with heart failure. Data will be collected with patient identifiers removed and analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 20
Catholic School Identity Across the Curriculum
Brian Barker
Advisor: Dr. Anne Morris

The Archdiocese of Detroit recently released a major document entitled, "Unleash the Gospels" as a result of a Synod that took place in 2016. Part of that document included Catholic education/schools, which resulted in another document entitled, "Unleash the Schools." Both documents are monumental and give a critical look into the future of Catholic education in the diocese of Detroit. By reading the documents, and using data already conducted, along with my own analysis, I will show the importance of creating a Catholic culture/environment across the curriculum for schools to be sustainable, as well as, to thrive in a 21st century world of education.

Poster Number: 21
Impact of Cardiac Rehabilitation on Hospital Readmission Rates Following CABG
Christine Brown, Lauren Collavino, and Hayley Sluka
Advisor: Dr. Patricia Clark

Cardiac rehabilitation programs (also known as cardiac rehab) are of the utmost importance to patients' successful recovery and return to prior health status and improved functioning following coronary artery bypass grafting (CABG) surgery. Cardiac rehab includes interventions such as exercise, education,

counseling, and other strategies aimed at reducing risk factors and promoting healthy lifestyle changes. Attending cardiac rehab reduces hospital admissions and associated healthcare costs, as well as decreases cardiovascular mortality while providing an improvement in quality of life. Objectives: 1) Discuss the role of the Advanced Practice Registered Nurse (APRN)—in both the acute and primary setting—in the management of patients who have undergone CABG surgery. 2) Discuss the impact of referral for, and participation in cardiac rehabilitation on 60-day hospital readmission rates and overall successful patient outcomes. Methods: To evaluate the effect of appropriate cardiac rehab referrals on the incidence of 60-day readmission rates, the students will perform a retrospective chart audit of approximately 60 patients using a universal data collection tool. Specific inclusion and exclusion criteria will be used. Findings will then be compiled and analyzed for any associations between cardiac rehabilitation and 60-day readmission rates. Data will be analyzed using descriptive statistics.

Poster Number: 22
Restorative Justice and Why the Use of Circles Benefit Students and Staff

Denise Brown
Advisor: Dr. Anne Morris

Restorative Justice and Why the use of circles benefit students and staff. This research discusses the restorative justice approach of using circles and how it affects the perceptions of communication, respect, and safety between students and teachers. Through survey analysis, interviews, and personal observations this research examines if the use of using circles improved environment and build relationships between students and staff. Also was an effective approach to discussing issues of delinquency without relying just on punishment.

Poster Number: 23
The Affordable Care Act and its Effects on Staffing Needs

Elizabeth Closser
Advisor: Dr. Sau Mui Lau

The number of patients increased after the Affordable Care Act passed. It allowed more patients to have access to healthcare insurance. Which in turn created a higher case load on medical staff, specifically nurses, all while the number of nurses did not increase with it. Telemedicine was proposed for reducing the workload of nurses, and allowing more time for the nurses to spend with the patients, and paying more attention to their medical care instead of rushing through the visit to be able to fit all the patients in. However, whether the nurses accept the use of the telemedicine or not. Therefore, the purpose of this study was to investigate the intention of the adoption of telemedicine by nurses. The research problem was how to develop a model to identify the factors that nurses are concerned with on its adoption. In order to understand attitude towards the adoption of telemedicine system, the aim of this research is to develop the adoption model and conduct a survey to identify the concerns of nurses to adopt the telemedicine system. This study used the Decomposed Technology Planned Behavior model to develop the research model. The convenient sampling was used and the sample size was 123. An internal

consistency reliability testing and Pearson correlation analysis were used. The results were used to develop the strategies for promoting the adoption of telemedicine system via social media.

Poster Number: 24
Improving the Awareness of Mental Health Services: A Survey and Framework Design for Relational and Educational Program Improvement

Adam Colden
Advisor: Dr. Sau Mui Lau

In the United States, approximately 1 in 5 adults in the United States have been diagnosed with a mental health disorder. Besides applying mental health therapies, family, community and healthcare providers' supports are one of the critical success factors for mental illness recovery. Although healthcare institutions had provided many mental health and consultation services to the patient's family, community and healthcare provider, they are reluctant to access these services due to fear stigma or lack of awareness of services. Current practice to increase awareness for mental health and consultancy services was mainly by mental health educational programs via company training, community agencies or school programs to the physicians, health care providers, and general population. However, limited economic resources for patients and limited education for providers has led to the inability to seek and obtain the mental health treatment services. Therefore, the aims of this project are to find out the correlation between one's mental health awareness and their utilization of healthcare services. A questionnaire was designed, and approximately fifty participants took part. Data was collected and analyzed using ANOVA, and Pearson correlation analysis. The Pearson correlation found that there is a significant correlation to increased mental health awareness when there is family or peer support and current use of counseling service/community mental health treatment. Slightly significant correlation was found in emergency services and inpatient treatment. A very slight correlation was found in Emergency Services and Inpatient Treatment. ANOVA results demonstrated no significant difference in age range, ethnicity or gender. Based on ANOVA there is a difference between education level and awareness of mental health services. A recommendation for a required screening process for primary healthcare providers and emergency room physicians is recommended.

Poster Number: 25
What are the Best Strategies for Developing a New Family Onboarding Process?

Jennifer Daddow
Advisor: Dr. Anne Morris

Creating and sustaining a welcoming and positive partnership between home and school is an integral part of building leadership. This project seeks to find preliminary data to discover the best and most proactive strategies for developing a new family onboarding process at the Middle level. All current families were asked to participate in a voluntary electronic survey about how well the school met their needs when they were a new family, what can be done to better meet the needs of new families based on their past experiences, and it also requests suggestions about how we

can better welcome and engage all families in school activities as a whole. Once the data was collected, research-based strategies were found in support of the current onboarding needs of the building, a welcoming committee was formed, and a process to welcome families into the school community is in its inception. Our immediate next step is to conduct a needs assessment that surveys our new and incoming families once we have access to their information. We will then merge the two sources of information to fully implement a plan for onboarding new families so we can meet the immediate needs of the whole school community by April 30, 2019. In doing this, it is our hope that we become more proactive and prepared for the needs of our community before the next school year begins, as well as to continue to invite and sustain positive partnerships with families throughout their middle school experience.

Poster Number: 26
Effect Parental Involvement Can Have on the Academic Skills and Interests of Children
Lisa Davis-Patterson
Advisor: Dr. Anne Morris

Studies show that parental involvement in schools has an effect on the academic, social, and emotional development of children. They also show that by the time students reach high school, parents begin to scale back on how involved they are with their child's school. Their experiences from Kindergarten through second grade shape their outlook on school, as well as their educational foundation. The perception a family has of the educational institution is often transferred to the child. Often times a parents own experience in school has defined their outlook on all schools. If administration were proactive in involving the parents in a positive way during enrollment, then parents would be more likely to become involved in school activities and less likely to shut down based on their perception of how the school views them and their child (Best Practices, 2004). When students are in in school and engaged in school activities, they are less likely to participate in negative activities. It also shows that children who have an interest in school are more likely to get better grades and test scores. Maddock (2011) suggested that students who exhibit behavior issues do so because they are less engaged. Students who have behavioral issues tend to have parents who are less involved in their daily educational experience.

Poster Number: 27
College Success: Early Generation Latinas in Education
Jose Del Toro
Advisor: Dr. Anne Morris

The rise of new retail is pouring water into the e-commerce. The composite of this poster is to look at trends that discourage or encourage 1st and 2nd generation Latinas toward college completion. While there are many underlying causes that lead to or away from college success, this study is specifically about Detroit Cristo Rey High School Latinas that are in the process of getting their college degree.

Poster Number: 28
Evolution of Payment Systems
Michael Detvay
Advisor: Dr. Sau Mui Lau

Consumer sentiment and habits are rapidly evolving with time and payment methods have also been a large part of that change. As previous methods become less secure as technology changes there are new demands from merchants and consumers to make these products simple to use and trustworthy. China has been leading the charge to break down barriers for new technology and simplify how currency is moved from one place to another. In contrast to the United States, there are several additional layers that a transaction must go through that has little to do with security and improvement of process. These extra processes not only have little benefit to either side of a transaction but on a larger scale are a waste of time and resources that could cause a merchant to increase their prices due to the extra cost of the transaction. Therefore, the aim of this study is to investigate the current development of e-payment system in USA and customers' concern on e-payment. A research model to understand customers' decision behavioral was done. A questionnaire was designed. A total sample size of 200 was done. Based on the customers' concern, recommendations on the e-payment system development and e-payment promotion strategies were proposed.

Poster Number: 29
An Evaluation of Police Facebook and Design of Social Community Map for Improving Police Integrity and Legitimacy
Jordan Dottor
Advisor: Dr. Sau Mui Lau

Police integrity and legitimacy depends on the success of the procedural justice implementation in police departments. The traditional approach used flyer and TV advertisement to promote and disseminate the procedural justice to public. Since social media is one of the popular communication media among people nowadays, the Michigan police department implemented a Facebook to improve the transparency of the procedural justice and connect with the citizens to fight against crimes. Therefore, the aim of this study is to conduct an evaluation on the new initiative of Facebook for improving the overall effectiveness, legitimacy, and integrity of police. A model with the constructs of Social Media, Crime Watches, Police Integrity, Department News, Police Effectiveness, Community Policing, Problem Solving, Response Time, Police Legitimacy, Transparency, Fairness, Impartiality, and Procedural Justice were proposed. A questionnaire was designed. Content validity, internal consistency reliability testing and Pearson r correlation were used for analysis. A total of 382 residents from two communities of Dearborn Heights and Wyandotte were sampled. The results found positive correlations with Dearborn Heights residents between problem solving methods and police effectiveness ($r=.24, p=.0008$). Results also showed positive correlations between social media and a view of legitimacy ($r=.16, p=.01$) and police effectiveness and a view of legitimacy ($r=.22, p=.001$). Results from Wyandotte residents showed positive correlations between problem solving methods and police effectiveness ($r=.86, p=1.0$) as well as police effectiveness and a view

of legitimacy ($r=.95$, $p=3.3$); however, these relationships were not statistically significant. An intelligent social community map and strategies were further proposed based on the findings to enhance the current development of the police social media platform as well as procedural justice.

Poster Number: 30
Evaluation of Primary and Secondary Prevention of Atherosclerotic Cardiovascular Disease with High or Moderate Intensity Statin Therapy
Jessica Fisher, Raji George, and Jaina Samuel
Advisor: Dr. Claude Lauderbach

Poster will present findings of a continuous quality improvement project that examined adherence to best practice guidelines for the primary and secondary prevention of atherosclerotic cardiovascular diseases (ASCVD). The project setting included - Family Practice Clinic, Geriatric Outpatient Clinic, and an Acute Care setting. The ACC/ AHATF has established guidelines for primary and secondary prevention of ASCVD. This guideline includes recommendations for adults aged 21-75 with clinical ASCVD or Low density cholesterol Level (LDL-C) ≥ 190 without clinical ASCVD to be treated with high-intensity statin or moderate-intensity statin if high-intensity is contraindicated. To measure the effectiveness of the practice in implementing this prevention guideline a retrospective chart review was conducted. Inclusion criteria includes: 1) established patients 2) males and females, 3) ages 21-75 years, 4) patients at risk for atherosclerotic cardiovascular disease, and 5) those with LDL-C >190 . Twenty charts from each service area were chosen randomly. A standard data collection tool was constructed to collect the following data: 1) age, 2) gender, 3) race, 4) insurance status, 5) w/ Clinical ASCVD (acute coronary syndromes, or a hx of MI, stable/USA, coronary or other arterial revascularization, stroke, TIA, or PAD of atherosclerotic origin), 6) Primary elevated LDL ≥ 190 w/o ASCVD, 7) high or moderate-intensity statin order in the chart. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national prevention guidelines and implications for practice will be presented.

Poster Number: 31
Blood Pressure Management in Stroke Patients: Assessment and Evaluation of Adherence to National Guidelines
Jai Georgy, Christopher Jackson, and Augustina Obi
Advisor: Tracey Chan

This poster will present findings of a continuous quality improvement project that assess the adherence to best practice guidelines for blood pressure management in stroke patients during the acute phase and for long term. The project was conducted in ICU setting and in patient rehab unit serving a population of adult patients. The American Heart Association and American Stroke Association recommend that within six hours of symptom onset of a stroke Systolic blood pressure of 150-220 mm Hg = lowering to 140 mm Hg and Systolic blood pressure of >220 mm Hg = lowering and monitoring SBP with continuous IV infusions. The American College of Cardiology and American Heart Association also recommends that in order to prevent a secondary stroke in a patient that has been receiving treatment for hypertension it is

imperative to restart antihypertensive treatment & aim for BP $< 130/80$ mm Hg. To measure the effectiveness of the practice in implementing these practice standards, a retrospective chart review was conducted. The inclusion criteria were 1) Age > 21 years-old, 2) admitted to hospital with neurosurgery consult or service or admitted to rehab, 3) diagnosis of an ICH or Ischemic Stroke. Sixty charts were chosen randomly. A standard data collection tool was constructed and the following data were collected: 1) age, 2) gender, 3) Blood pressure, 4) blood pressure medication prescribed, if appropriate. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 32
Pneumococcal Vaccination Compliance in Geriatrics
Gail Grunkemeyer, Kristin McErlean, and Emily Podraza
Advisor: Dr. Patricia Clark

Community-acquired pneumonia (CAP) is the leading cause of infectious disease-related death in the United States, with greatest incidence in patients 65 years and older. CAP poses significant financial and healthcare burdens. While improving immunization rates prevents infections, minimizes hospitalizations, and results in overall improved patient care, studies show that low vaccine compliance remains a significant public health issue and CAP has disproportionately smaller prevention efforts than similar disease burdens such as myocardial infarction and stroke. Pneumococcal Vaccination Compliance in Geriatrics is a quality improvement project that will evaluate facility compliance with guidelines from the Infectious Disease Society of America (IDSA), Center of Disease Control and Prevention (CDC), CMS, and the Joint Commission core measure for Pneumococcal Vaccination. Analysis and interpretation are in progress and will be completed by April 30, 2019. The setting will involve three facilities including a sub-acute rehab (SAR) in Metro Detroit, a surgical intensive care unit (SICU) at a Level I trauma center in Metro Detroit, and a medical intensive care unit (MICU) at a Level I trauma center in Detroit. A retrospective chart review of sixty unique in-patient individuals ≥ 65 years of age, located at one of the aforementioned facilities, will be completed. Process indicators will include documentation of vaccination status at time of admission and documentation of administration of PCV13 or PPSV23 in eligible patients not previously vaccinated. The data will be analyzed using descriptive statistics. Findings, implications for practice, and role of the advanced practice nurse will be evaluated and discussed.

Poster Number: 33
Motivational Interviewing to Create Sustainable, Healthy Lifestyle Changes
Furwa Haque
Advisor: Dr. Joy Oslund

Patients and clients often find themselves wanting to make healthy changes to their lifestyle, but are often at a loss to know how or where to begin. Medical professionals are driven with the desire to help patients and clients create those changes with the best possible results. Motivational interviewing has been heavily researched and found to be a useful tool to elicit greater results than counseling

methods of the past. This project used motivational interviewing in nutritional counseling sessions across 4 weeks with 2 participants to help them each create at least 1 sustainable healthy lifestyle change. Each participant was able to successfully identify healthy lifestyle changes they wanted to make, set weekly goals to work towards them, and both participants successfully created at least 1 sustainable healthy lifestyle change.

Poster Number: 34
A Survey on the Attitude towards OUD Patients and MAT Training by Nurses
Ranee Hartwick
Advisor: Dr. Sau Mui Lau

Opioid abuse increased in frequency causing a public health crisis in the United States. The Opioid epidemic drained the nation of billions of dollars and was to blame for sixteen deaths per day, as HRSA reported in 2016. Medication assisted treatment (MAT) with Buprenorphine has proven efficient and cost effective in battling the epidemic. However, provider stigma towards opioid use disorder (OUD) patients resulted in few clinicians having MAT wavier. Recent research studied physician's attitudes and beliefs on MAT training but ignored the nurse's attitudes and beliefs even though nurses are the key person of point of contact person for OUD patients. Therefore, the research focus of this study is to investigate nurses' concerns on treating OUD patient and MAT training. The research question was what behavioral model to be used. The objectives were to conduct the survey and develop a pre-MAT training in nursing curriculum. In the survey, the decomposed of theory of planned behavior model was selected and a questionnaire was designed. The internal reliability testing and Pearson Correlation were used for data analysis. Results showed that nurses had negative attitudes ($r = -.32$, $p = .08$), perceived norm ($r = -.05$, $p = .78$) and perceived behavioral control ($r = .18$, $p = .34$) towards treating OUD patients with MAT. We recommend a pre-MAT workshop to be incorporated into BSN curriculum. In conclusion, the induction of pre-MAT workshops will enhance nurses' interaction skills with the OUD patients, decreasing the provider stigma, and increasing nurse's willingness to participate in MAT care under supervision of MAT waived physicians and nurse practitioners.

Poster Number: 35
Adjuvant Therapy in Neuropathic Cancer Pain
Heidi Haynes and Linda Hadous
Advisor: Dr. Patricia Clark

Adjuvant Therapy in Neuropathic Cancer Pain is a quality improvement project that examined adherence to best practices for the management of neuropathic cancer pain. This pain is experienced in the cancer population due to the cancer itself or a complication of treatment. Neuropathic pain is a stabbing or burning that can affect a patient's quality of life, but with proper treatment it can often be adequately controlled. Research indicates that opioids alone are not effective, therefore, using adjunct medications is recommended. The National Comprehensive Cancer Network (NCCN) (2010) developed the Adult Cancer Pain Clinical Practice Guidelines in Oncology. The NCCN guidelines provide evidence-based treatment for neuropathic cancer

pain. These guidelines recommend the use of antidepressants and anticonvulsants as coanalgesics for the treatment of this pain; topical agents are also well supported. A retrospective chart review is being conducted to evaluate practice standards for cancer patients experiencing neuropathic pain. Forty medical records of palliative care patients will be reviewed, analysis and interpretation is in progress. The subjects are oncology patients with neuropathic pain. The practice settings include an inpatient palliative team and a home palliative care service. Process indicators to be evaluated include: 1) Documentation of anticonvulsants use to decrease neuropathic cancer pain. 2) Documentation of antidepressants to decrease neuropathic pain. 3) Documentation of topical anesthetic to decrease neuropathic pain. Our outcome indicator is: Patients verbalize that their pain has decreased based on numeric scale of 1-10. Our variables are patients: age, gender, race, comorbidities, and (type of cancer, chemo).

Poster Number: 36
Culturally Responsive Teaching
Rhonda Henry
Advisor: Dr. Anne Morris

The achievement gap, especially for African American students, is a deeply rooted issue in education. Educators understand that the gap exists, but are often perplexed about what approach to take to combat the issue. Farmington Public Schools has been intentionally tackling the achievement gap issue over the last several years. School administrators have been trained in cultural competency and are charged to bring the work to their respective buildings. Tremendous diversity exists among the student population across Farmington Public Schools and the makeup of students at Longacre Elementary School follows the trend. Another consistency across schools is that the district's overall performance on standardized tests and other achievement measures indicate that the African American students are the lowest performing subgroup. The teaching staff at Longacre Elementary is predominantly Caucasian which precipitates the need for ongoing cultural sensitivity training along with implementation of culturally competent strategies. Fourth and Fifth grade students in the Farmington Public School District are given a Student School Climate Survey (LACO) three times each school year. The survey questions range from overall perceptions of teachers' understanding and encouraging of different races and ethnicities to beliefs about teachers having different expectations for students based on their race. The project focuses on whether student perceptions of equitable learning environments, as indicated in the Student School Climate (LACO) Survey data, increase when teachers actively incorporate specific culturally responsive classroom strategies into their teaching.

Poster Number: 37
Does Flipped Classrooms Improve Student Learning?
W. Barnett Jones
Advisor: Dr. Anne Morris

The scope of this research will delve into the issue of how teaching instruction is given to the student. Does the traditional classroom provide a better learning experience for today's student or does the flipped classroom provide a better learning experience for today's

technology savvy student? Since the inception of the public-school system, the educational system used to educate our youth has been very slow to change. Horace Mann, who is considered the father of modern education, standardized and structured the public-school system back during the Common School Movement in 1838. It is that same classroom structure that is in place today in most public and private schools. Can today's students acquire and learn more information when taught by an instructor using the flipped classroom method, than the traditional lecture method? Additionally, will student interest levels and work output be increased with the greater use of the technology they are already immersed in? Comparably, will the flipped classroom method allow more "hands on" instruction when class is convened and the teacher is in the room with the student needing help on a problem, than the lecture method? Does the flipped classroom work in the K-12 educational setting? These are the types of answers this study will attempt to shed some light on.

Poster Number: 38

Appropriate Prescribing of Beta Blockers in Congestive Heart Failure

Kristin Kennaugh, Jason Baker, and Naheda Thabata

Advisor: Dr. Claude Lauderbach

This poster will present findings of a quality improvement project that examined adherence to best practice guidelines for prescribing of beta blockers in patients with congestive heart failure. The setting was an outpatient heart failure clinic and two acute care settings. The American College of Cardiology/American Heart Association (ACC/AHA) recommends prescribing Beta Blocker therapy to patients with LV Systolic Dysfunction. Guidelines focus on metoprolol, carvedilol and bisoprolol to improve function and symptoms of CHF. To measure these standards a retrospective chart review was conducted. The inclusion criteria for this project were: 1) patients in the clinical setting, 2) males and females, 3) Patients age ≥ 18 , 4) diagnosed with CHF, 5) Current or prior LVEF $< 40\%$ with recent (12 months) 2D Echo confirmation. Sixty charts were chosen at random. A data collection tool was designed. Findings will be examined for adherence to guidelines and implications for practice will be presented.

Poster Number: 39

Adoption Study of Electronic Cigarette by Smokers and Non-Smokers

Noura Khreis

Advisor: Dr. Sau Mui Lau

Electronic cigarette (EC) use has increased exponentially throughout the last decades. The efficacy, safety and reasons behind the utilization of EC are still vague. The objective of this study is to investigate whether attitudes, norms and perceived control factors being correlated with the behavior of EC use. It used the Decomposed Theory of Planned Behavior model to design the questionnaire and investigated whether EC adoption being perceived as a safe and acceptable smoking cessation method. The survey was done via online and in-store. The target sample was the current EC users. Content validity and internal consistency reliability testing were used to test the reliability of the survey. Pearson's correlation coefficient was used to test the

hypotheses. Two sample z- test of Proportion was used to test any difference in the documented extent of smoking (heavy/medium/light) before and after the use of EC. Alpha was set as 0.05. A total of 74 participants were collected. The results showed that perceived usefulness($r=0.7$, $p<0.01$), relative advantage($r=0.8$, $p<0.01$), and compatibility ($r=0.8$, $p<0.01$), were positively correlated with the attitudes towards EC. Peer/ family influence ($r=0.6$, $r<0.01$) and social media influence ($r=0.6$, $r<0.01$) were positively correlated with Subjective norm. Regulation facilitating conditions was positively correlated with the perceived control of using EC ($r=0.7$, $p<0.01$). The results of this study suggests that EC is perceived as being useful, compatible and less toxic than regular tobacco. Efforts should however be made to educate users about the learned risks of EC especially for dual users.

Poster Number: 40

But it Hurts! An Evaluation of Pain Assessment and Management Prior to Physical Therapy

Michaelene Koczara and Sheri Houghland

Advisor: Tracey Chan

This poster will present a quality improvement project examining adherence to best practice guidelines for pain assessment and management in older adults currently undergoing physical therapy (PT). This project was conducted in both acute and primary care settings. The American Geriatrics Society have established guidelines for the management of persistent pain in older adults. This guideline addresses assessment and management of pain in older adults with an emphasis on general principles of pharmacological treatment, including risks and benefits of long-term opioid therapy. The Joint Commission on Accreditation of Healthcare Organizations (JACHO) have also released pain assessment and management standards of care. To measure the effectiveness in implementing this guideline and practice standards across two very different care settings, a retrospective chart review was conducted. Data analysis and interpretations are currently in progress and will be completed by presentation. Inclusion criteria for our project were: 1) patients within our respective clinical sites, 2) age > 65 , 3) receiving PT, and 4) at risk for pain. Forty charts were chosen at random. A standard data collection tool was used to record the following information: 1) age, 2) gender, 3) race/ethnicity, 4) if pain was assessed within 2 hours of receiving PT, 5) was pain treated, 6) type of medication administered, 7) route of medication administration, 8) was pain reassessed within an hour of receiving medication, 9) was PT completed, 10) primary diagnosis and 11) did patients have a previous diagnosis of chronic pain.

Poster Number: 41
The Effects of School Uniforms and Student Response to Violations of Dress Code
Carrie Kucka
Advisor: Dr. Anne Morris

Public schools around the United States began adopting uniform dress code policies more often following former President Bill Clinton's endorsement of uniforms in his 1996 State of the Union Address. After the inception of a uniform dress code, many public school districts observed a reduction in classroom distraction, disciplinary issues, and violence. At Old Redford Academy-Preparatory Academy (ORA), a Charter public school academy in West Detroit Michigan, there has been a dress code that requires students to wear a uniformed outfit daily since its inception in 1999. In the student code of conduct, the reason for the dress code is outlined as "an attempt to ensure a safe and orderly environment conducive to learning and the attainment of high academic goals... A concerted effort had been made to identify those specific items that may cause a distraction to the educational process and/or interfere with student safety." Since the Middle School was instilled, ORA have had a consistent issue with students violating the dress code. Most students attempt to wear the basics; however, specifics of the dress code are violated on a regular basis. The objective of this research is to understand why students continuously violate the dress code and if the uniform is effective in decreasing disciplinary issues and distractions. A sample of student and staff surveys will be given to examine the consequence system, effects of dress code on disciplinary problems and reasons for evaluated.

Poster Number: 42
The Efficacy of in School Suspensions in Urban Schools
Violetta Kuzniar and Spencer Riley
Advisor: Dr. Anne Morris

Discipline needs to be taken care of in urban schools. Administrators in urban schools tend to suspend students because there isn't an effective in school suspension program. In school suspensions are effective when implemented thoroughly and when all stakeholders know the expectations.

Poster Number: 43
Sunshine Club
Darlicia Lee
Advisor: Dr. Anne Morris

The Sunshine Club is a program at my school that offers students/parents the opportunity to come to school early, in efforts to reduce the tardy and absent percentage at my school. Being on time to school is very important because our reading program is in the morning and the students that are tardy miss at least half of the vital instruction. I looked at the chronically absent list of students and offered them a chance to come earlier, to school to do various activities, with the hope that it will reduce the number of students that are tardy and absent each day. I will be looking at data from the beginning of the year and once I started the sunshine program for this school year.

Poster Number: 44
COPD Management in the Primary and Acute Care Setting
Nicole Lively, Colleen Ferrara, and Claire Greenshields
Advisor: Tracey Chan

Chronic Obstructive Pulmonary Disease (COPD) is a common, preventable and treatable disease that is a major cause of morbidity and mortality throughout the world (GOLD, 2018). Each year, approximately 12 million adults in the U.S. are diagnosed with COPD and 120,000 die (NIH, 2010). Acute exacerbations are responsible for more than 600,000 hospitalizations annually, resulting in direct costs of more than \$20 billion. Successful diagnosis and management of COPD is important because exacerbations have been found to negatively impact health status, rates of hospitalization, and disease progression (GOLD, 2018). By appropriately diagnosing and classifying COPD, disease progression can be slowed and exacerbations can be minimized. This quality improvement project will evaluate adherence to the GOLD best practice guidelines for diagnosing and treating stable COPD and COPD exacerbations. The project setting was a primary care practice and two medical intensive care units. To measure the effectiveness of implementing the GOLD Criteria, a retrospective chart review was conducted. Inclusion criteria for this project included: 1) diagnosis of COPD, 2) male and female, 3) 40-80 years old, 4) for acute care COPD exacerbation requiring ICU admission. 20 charts of primary care patients and 40 charts of acute care patients seen in 2018 were chosen at random. A standard data collection tool was constructed. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 45
Influenza Vaccine Compliance
Christine Malouf and Ashley Ajlouny
Advisor: Tracey Chan

This project will present findings of a continuous quality improvement project that examines the adherence to best practice guidelines in obtaining the influenza vaccine before or during the 2018-2019 flu season in all eligible adult patients 18 years and over. The project settings were a homeless clinic in Detroit and an Emergency Department in Livingston County, both who serve a population of adult patients. A retrospective chart review will be conducted after examining 40 medical charts. Data will be analyzed using descriptive statistics. Process indicators include: 1. Adults who present to the ER and the homeless veterans clinic during the 2018-2019 flu season who were offered and received the 2018-2019 flu vaccine, 2. Adults eligible for the influenza vaccination who presented to the ER and homeless clinic with signs and symptoms of influenza and have received the influenza vaccine and 3. Adult patients who presented to the ED and homeless clinic who tested positive for influenza and were prescribed Tamiflu within the appropriate, recommended time frame. The role of the APRN will be discussed. Objectives: 1) Examine influenza vaccination compliance amongst adults who presented to the ED or homeless clinic during the 2018-2019 flu season; 2) Determine whether adults who did receive the influenza vaccine yet still presented with flu-like symptoms, presented with symptoms that were mild and treated appropriately with pharmacologic

management, or tested negative for influenza; and 3) Understand one of the roles of an advanced practice registered nurse is to promote health and prophylaxis of disease, one such as Influenza.

Poster Number: 46

Anemia of Chronic Disease

Kevin Marchildon, Charity Otieno, and Nichole Zuehlk

Advisor: Dr. Patricia Clark

Anemia is a common occurrence in patients with chronic illnesses especially those with Chronic Kidney Disease (CKD) stage 5 of the disease. The use of erythropoiesis-stimulating agents (ESAs) in these patients with CKD has been shown to significantly improve in the management of anemia. ESAs use has been shown to cause a great improvement in CKD patients by not only maintaining their hemoglobin levels as stated in the kidney disease guidelines but also an overall improvement in the patient's quality of life. The use of ESAs is not without its setbacks, studies have shown that the benefits of ESAs use outweigh the risks. This review is aimed as highlight the benefits of ESAs for those patients with CKD stage 5 with hemoglobin levels below 10g/dl and its effect on these patients CBC levels.

Poster Number: 47

The Effects of Using Built-in Study Hall Time in High School to Support Tiered Interventions

Heidi Marlow

Advisor: Dr. Anne Morris

Providing proper academic interventions at the high school level are challenging due to students' schedules and credit requirements to graduate. This study is to research the effects of using built-in study hall time to provide interventions, rather than pulling students out of their classes where they miss valuable instruction. Because a built-in study hall time would effect all students, not just those at-risk students, research is needed to see if there is benefit to all students involved. For this research, a high school, which has a built-in study hall period called Advisory three days a week, implemented pilot programs to support their MTSS (Multi-Tiered System of Support). These pilot programs consisted of a testing room, new-student introduction class and Tier 3 intervention groups. The goal was for certain groups of students to have a common place to go in order to open up space and time for teachers to assist at-risk students in their Advisory period. When a teacher is tied down proctoring tests, acclimating new students, and working with the general population on school work, there is very little time or availability for the teacher to provide meaningful interventions to those students in need. Analysis and Interpretations are in progress and will be completed by April 30, 2019.

Poster Number: 48

A Systematic Review on the Causes and Preventive Methods for Recurrent Stroke

Amanda McCoy

Advisor: Dr. Sau Mui Lau

Studies showed that a patient with a first stroke has high chance for second stroke. Second stroke causes government burden and healthcare institution's workload increases that is avoidable. Lots of

studies mentioned about health diet and exercises can reduce the chance of second stroke. Therefore, this study was to investigate the causes and preventive methods for second stroke and to develop a prevention plan for second stroke. This study used systematic review to find out the causes and preventive methods. EBSCO host database was used. The article from 2009-2019 were reviewed. The results had 35 articles and showed that stroke patients who adjust their lifestyles to incorporate healthier diets, stress reducing therapies and exercise are less likely to have a second stroke. Healthier nutrition intake including brain healthy foods, tomatoes after a stroke can help patients rebuilding their brain functionality. Implementing counselling early after a patient having a stroke can reduce their depression and stress, they are less likely to have a second stroke. High intensity and endurance exercise train the body to regain strength and keep blood flowing at a better pace to increase the chances of recovery. Therefore, nutrition, counselling and exercises other than the stroke therapies are at the top of priorities after a patient has a stroke to reduce the risk of a second stroke. A community-based monitoring apps for prevention were recommended to reduce the cost and increase the success rate of the preventive therapies.

Poster Number: 49

Developing an Integrated Suicide Assessment Tool Using Systematic Review and Machine Learning Approach

Paige McNamara and Kristine Baker

Advisor: Dr. Sau Mui Lau

According to the World Health Organization (WHO), over 800,000 people die by suicide every year. There are many reasons suicide is attempted, which are situational and demographic based. Although many suicide assessment tools, such as the Scale of Suicide Ideation (SSI) and the Columbia Suicide Severity Rating Scale (C-SSRS), were developed based these suicide risks, they mainly focused on mental state. Many studies researched found that demographics and genes are also some potential factors increasing a person's suicide risk level. Therefore, this study aimed to perform a systematic review to identify the risk factors leading to a person's suicide risk. Content analysis and meta data analysis were used in this study. The ProQuest database and Google Scholar were used to identify past research between the years of 2001 and 2019 relating to suicide. Since Western and Asian societies are vastly different, this study covered the review of the United States and China, to identify and quantify these differences. After finding 50 sources for each country, risks found in more than 10% of these sources were considered critical risk factors for each society. The common critical risks identified were gender, age, employment status, marital status, mental illness, and substance abuse. A generic and integrated suicide risk assessment tool was developed based on these results. Machine learning and social media monitoring are proposed to be integrated into the assessment tool in the future to adjust the parameter of the model to cope with the change of social environment and society differences.

Poster Number: 50
The Daily Five
Agatha Mensah
Advisor: Dr. Joy Oslund

The purpose of this study was to understand how the Daily Five and CAFÉ were implemented, and to document students' experience and learning. The Daily Five is a strategy that U.S. schools have adopted to improve reading. This means that students of all reading abilities will improve through its usage. Reading difficulty has become a big issue for educators and to improve reading is their top priority. Research has proven a low level for reading ability among students (Stateside Staff, 2018, p. 1). Reading is an important element for school children. Through reading, students are able to learn all subjects. Therefore, with the use of Daily Five students will actively participate in reading activities and also cultivate the habit of reading. Findings reveal that indeed the practice of the "Daily Five" is an effective tool for the students in improving reading. It is concluded that the Daily Five and the CAFÉ enhance the reading skills. The result of the study shows that with the use of the Daily Five practice, students exhibit an increase in reading abilities.

Poster Number: 51
Seizure Prophylaxis in the Setting of Moderate to Severe Traumatic Brain Injury
Elise Pavlick, Zaineb Albachachy, and Gemma Maurer
Advisor: Dr. Patricia Clark

According to the Centers for Disease Control and Prevention (CDC), traumatic brain injuries (TBIs) contribute to about 30% of all injury deaths. These statistics make the TBI a major cause of death and disability in the United States. One complication of a TBI is the development of post-traumatic seizures (PTS) and post-traumatic epilepsy (PTE). PTS can occur early (within seven days of injury) or late (a week to three years post TBI). According to the Brain Trauma Foundation (2016), the rate for clinical PTS is roughly 12% while subclinical seizures only detected on electroencephalography (EEG) may be as high as 20-25%. According to the Guidelines for the Management of Severe Traumatic Brain Injury created by the Brain Trauma Foundation, there is evidence that supports the prophylactic use of antiepileptic drugs (AEDs) to decrease the incidence of early PTS (Carney, Totten, O'Reilly, Ullman, Hawryluk, Bell, & Harris, 2016). This poster will present findings of a continuous quality improvement project that examined compliance with the Brain Trauma Foundations guidelines for seizure prophylaxis in moderate to severe TBI. A retrospective chart review of 60 patients who were admitted inpatient or followed-up outpatient with a diagnosis of moderate to severe TBI will be completed. Process indicators in the inpatient setting include documentation that the appropriate AED is ordered according to the guidelines and that a neurology referral or appointment is documented at the time of discharge. The process indicator in the outpatient setting will be documentation that an AED is initiated to treat late PTS within 8 days to 2 years post-traumatic brain injury.

Poster Number: 52
MSU State Walk: A History
Patrick Rice
Advisor: Dr. Joy Oslund

In 1990, the Residence Halls Association of Michigan State University introduced a new, nighttime walking service to provide students with a secure walk home from the main branch of the MSU library to the residence halls on campus. Over the past 29 years and despite changing times, State Walk has continued to offer students of Michigan State University a safe way to traverse the campus at night from the library to their various destinations. This study looks at the history of the program from its earliest inception to its modern incarnation through interviews, reviews of media articles, and archival research. It provides insight into the initial development of the program to the implementation of the program and the challenges the program has faced over its history. State Walk is a true story of the ability of a small group of individuals who set out to make the campus a safer place and their lasting impact on the history of Michigan State University.

Poster Number: 53
Study of Factors that Influence Tobacco Use/Smoking: A Survey and Program Design Using Social Media, Artificial Intelligence and Knowledge Personalization for Smoking Cessation Approach
Vibhooti Satya
Advisor: Dr. Sau Mui Lau

Smoking is the leading preventable cause of disease and death in the United States. Smoking affects not only human's respiratory system, but also immune system, cardiovascular system and reproductive system. Although, there were many smoking cessation programs, the effectiveness of those programs was low. The success of smoking cessation depends on several factors such psychosocial, socioeconomic and behavioral intention. An effective smoking cessation program should be designed to tackling on these factors. Since social media technology and artificial intelligence are commonly used, a personalized smoking cessation program with the adoption of these technologies can help in improving the monitoring of the smoking behaviors and motivating smokers to quit smoking. Therefore, the aim of this research project is to understand the factors influencing the tobacco use and to develop a novel personalized smoking cessation program. A survey was designed in this study. The correlations of the environmental, socio-economic and personal factors with the tobacco use were found. The existing smoking cessation programs were then reviewed and the gaps of the programs tackling on these influencing factors were evaluated. A novel personalized smoking cessation program was finally proposed by using social media and artificial intelligence.

Poster Number: 54
Does the High School Placement Test Correlate with Student Achievement in their Freshman Year?

Jeff Schmitz

Advisor: Dr. Anne Morris

This research project will look in the effectiveness of the High School Placement Test (HSPT) and how accurately it predicts student success in their Freshman year. One issue that High Schools who use the HSPT as an entrance exam are having is placing students into the correct Freshman classes, especially for mathematics. This study will correlate student scores on the HSPT with the scores the students earn in their core classes during their Freshman year. It will give an overall view of the effectiveness of the HSPT in predicting student success. The intent of this project is to provide schools who use the HSPT with data to either back up the use of this test as their entrance exam or give the schools a reason to move on from the HSPT.

Poster Number: 55
A Comparison of Chinese and Western Medicine on Alleviating the Side Effect of Chemotherapy in Breast Cancer: A Medical Ontology Building

Melissa Shepler

Advisor: Dr. Sau Mui Lau

The use of Traditional Chinese Medicine (TCM) by breast cancer patients is a growing trend around the world. Few studies examined the complexity of treatments available that involved traditional Chinese medicine in western society and its possible benefits. Therefore, this study aimed to do a systematic review on the possible methods of treatment of breast cancer using both Western and Traditional Chinese Medicine and to compare across them for reducing the side-effects induced by chemotherapy in breast cancer. The Google Scholar, Medline and EBSCOhost databases were used and ten years' articles were reviewed. 30 articles were identified. The findings showed that the top 5 side-effects created by chemotherapy in breast cancer patients were nausea (78%), vomiting (69%), diarrhea (59%), Fatigue (57%), and alopecia (48%). These side-effects can be alleviated by not only western medicine but also Traditional Chinese Medicine. Since TCM was rooted in the ancient philosophy of Daoism, it emphasized natural resources and man's position between heaven and earth. Other than using herbal remedies acupuncture, Qigong/Tai Chi were commonly used.

Poster Number: 56
Venous Thromboembolism Prophylaxis in Hip Fracture Surgery Patients

Radmila Simovski, Danielle Hilderbrand, and Ashley Phillips

Advisor: Dr. Patricia Clark

This poster will present findings of a continuous quality improvement project that examined adherence to best practice guidelines for venous thromboembolism prophylaxis in post-operative hip fracture surgery patients. Patients that undergo a hip fracture have decreased mobility. The injury along with decreased

mobility leads to decreased blood flow, endothelial damage and a hypercoagulable state. Therefore, this patient population is at higher risk of experiencing a venous thromboembolic event (VTE). The patient can develop a deep vein thrombosis or fatal pulmonary embolism, which are main causes of mortality after hip fracture. The American College of Chest Physicians (2012) have established guidelines for the use of anticoagulants to be implemented prophylactically to reduce the risk of deep vein thrombosis (DVT) and pulmonary embolism (PE) in post-operative patients who underwent major orthopedic surgery (p. e279S). A retrospective chart review of 60 medical records will be evaluated to assess compliance with practice standards related to VTE prophylaxis in orthopedic trauma patients post-surgery. Data collection will occur at two separate practice sites that include one inpatient setting and one rehabilitation setting. Of the 60 medical records, 40 will evaluate what anticoagulation patients are prescribed upon discharge and if a time frame of 10-14 days is specified. In addition, 20 records will evaluate what type of anticoagulation, if any, the patient is admitted with to the rehabilitation center. At both sites, an outcome of deep vein thrombosis or pulmonary embolism occurrence within 10 days of surgery will be evaluated.

Poster Number: 57
Using Social Network Technology to Improve the Substance Abuse Prevention Program: A Survey and Conceptual Framework Design

Ashley Smith

Advisor: Dr. Sau Mui Lau

Currently, there are two major types of substance abuse prevention programs. D.A.R.E. provides the evidence-based approach to educate the youths on substance abuse's consequences and the Interactive Based Substance Abuse Prevention Program focuses on the interpersonal skills and active engagement skills between the teachers and students to provide substance abuse prevention education and awareness. However, youth's growth environment is one of the critical factors causing their substance abuse. Only educating students on the consequences and impacts of substance abuse is not enough, there is a necessity to have a substance abuse prevention program that can be customized based on youth's growth environment. Therefore, this research study evaluated and analyzed what factors causing students on substance abuse. A research model and questionnaire were designed to determine the potential socioeconomic and environmental factors that may cause students with a higher risk of engaging in substance abuse. These factors were then integrated into the current substance abuse prevention program that made the program to be customizable based on youth's growth environment for substance abuse prevention education and awareness. It ultimately improves the efficiency and effectiveness of the substance abuse prevention program.

Poster Number: 58
Authoritative Classroom Management Style and Student Learning Outcomes in a One-to-One Program

Adam Walentowicz

Advisor: Dr. Anne Morris

A quantitative-correlational study that examines if authoritative classroom management style will produce the highest student-learning assessment scores in a one-to-one iPad school environment. Twelve Catholic high school teachers (9th – 12th grade) with various years of experience and among four different academic subject areas participated in the study. The findings from this study have implications of assisting other schools and teachers in the implementation of a successful one-to-one program.

Poster Number: 59
The Creation of a School Emergency Operations Plan

Scott Wisniewski

Advisor: Dr. Anne Morris

School safety has become more than just the annual fire and tornado drills that we use to run up until the Columbine tragedy. Schools must create plans for all sorts of events such as active shooters, lock down drills, chemical spills, suicide, evacuations, etc. This project has covered the process of creating a school wide EOP.

Faculty Presentations

Poster Number: 60
Development and Integration of Nurse Practitioner Competency Assessment Tools

Tracey Chan, Dr. Patricia Clark, and Dr. Gail Lis

This presentation explores various metrics integrated within a nurse practitioner program that measure students' achievement of the Adult Gerontology Nurse Practitioner (NP) Acute Care and Primary Care Competencies. According to AACN (2016), competency is defined as "an observable ability of a health professional, integrating multiple components such as knowledge, skills, and attitudes. Since competencies are observable, they can be measured and assessed to ensure acquisition" (American Association of Colleges of Nursing, 2017, p. 2). The complex evaluation of the NP student's clinical performance and progress toward meeting the NP competencies is an ongoing challenge for NP faculty. In an attempt to meet this challenge three student-centered evaluation tools were developed, integrated, and evaluated within our NP program. These evaluation tools capture the preceptor's assessment of the student, the clinical faculty's site visit assessment, and the student's self-evaluation. The preceptor and faculty site visit evaluation tool reflect constructs from the population competencies with concrete language that is easily interpreted by the preceptor and clinical faculty. The student self-evaluation tool affords the students the opportunity to reflect upon their growth in the NP program and interpret the meaning of their clinical experiences within the context of the competencies. The process of tool development, the integration of assignments reflecting competency progression in the population-

focused courses, and overall evaluation of these new metrics will be highlighted. Exemplars will be shared during the presentation in addition to ideas related to integration of competencies across the entire curriculum.

Poster Number: 61
Identifying Risk Profiles that Warrant Acute Hospital Admission in Stable Hemodialysis Patients

Janice Marchildon

Chronic Kidney Disease (CKD) is a growing epidemic affecting millions of people. Patients with CKD who progress to End Stage Kidney Disease (ESRD) have a significantly shortened life expectancy and an overall mortality rate more than eight times that of the general population (USRDS, 2014) In addition to increased mortality, it is noted that ESRD patients have a symptom burden comparable to that of cancer patients (Dara, Afessa, Bajwa & Albright, 2004). As the incidence of ESRD increases and the mortality and symptom burden become more complex, it is imperative to gain a broader understanding of the health risks that warrant emergency room visits in the patient population. Understanding the health risks will aid health care providers in their illness prevention efforts. The purpose of my project is to identify risk profiles among stable ESRD patients on hemodialysis that would increase the risk for acute hospital admission. The PICO question guiding inquiry is as follows: In stable hemodialysis patients (P), what risk profiles (I) can lead to hospital admission (o)? Setting: The setting will include a 300 plus acute care regional hospital. The implementation plan will include collecting data on all admitted end stage kidney disease (ESRD) patients including reason for primary acute hospital admission. The timeline will include a 30-day period of data collection to achieve sample of a minimum of 100 patients. In this pilot study, there will be a large number of variables being assessed including demographics, admission data and patient treatment characteristics including history of compliance.

Interactive Display

Shards of Life – Creative Writing Manuscript

Barbara Glover

Advisor: Ioana Fracassi

“Shards of Life” is a collection of original poetry, prose, travelogue, and fine art inspired by life experiences. The manuscript developed gradually for a creative writing course taken in the fall of 2018. The book attempts to tap into the shared experience of being human. It contemplates those universal ties that bind, twist, tear, but also repair our lives. It reflects on the experience of being a student writer, who welcomes the joy of discovery, and the challenge of articulating in fresh language the world she sees about her: nature, art, beauty, people. A passion for travel, for physical nature, and for adventure, also finds expression here. The natural interlacing of creative work mirrors the complex intertwining of my spiritual, emotive, and creative temperament. Through confessional poems and photography readers will enter in the intimate chambers of my own experiences. Through fiction they will share in the pleasure I draw from imaginative thinking, and muse perhaps, at my curiosity and humor. Travelogue will take them to places I love. In whimsical word-photos they will find the playful dialogue of language and image. My original artwork is an invitation for the readers to share in my passion for color, shape, and texture. Concretely, “Shards of Life” creates and recreates a life in writing; that of a woman artist who explores with language and image, with memory, observation, and reflection. May readers find in the pages of this heartfelt collection some thread or shard of their own story.

questions about how 3D printing can impact these fields, and how our students can get involved in the world of emerging technologies.

Ford Community Corps Poster Presentations



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Team #1 Business

David Joseph Rodriguez

Mentor: Prof. Adela Lau, Assistant Professor and Director of the MU Center for Business

Community Partner:

Fish and Loaves

www.flcfp.org

The project was divided in two phases. In the first phase, 20 students in the course “MIS 2390 Emerging Trends in Computer Technology” were divided in groups in Fall 2018. They worked on creating an infographic for Fish and Loaves annual report and social media marketing design. The projects competed for a 90-hour co-curricular internship at Fish and Loves to ensure continuity of the project. The goal for the second phase is to create a sustainable influx of support for Fish and Loaves on donation marketing, and for the student to acquire skills in the real world through experiential learning. The deliverables include a social media marketing strategy and Instagram posts implementation and evaluation.



Team #2: Dietetics

Nicole Chestnut, Genieva Gandham, Suzanne Gutowski, and Leah Oldham

Mentor: Prof. Laura Kull, Director, Didactic Program in Dietetics and Assistant Professor of Nutrition and Food Science

Community Partner: Plymouth/Canton Adults in Transition Autism Program-ATAU (Madonna location)

www.pccsk12.com/departments/special-education

Every Friday, the Dietetics Team collaborates with the Adult Autism Program to prepare lunch with the ASD students in the food laboratory at Madonna University. Each ASD student is paired up with a team member and is encouraged to cook as independently as possible. The team’s job is to make sure the students cook safely and to incorporate nutrition education into the process. ASD students are also encouraged to try new foods through the “Try It” program started this semester. These activities provide them with the opportunity to enhance self-sufficiency as well as social skills.



Team #3: Education

Danielle Flinchum, Alexandra Jedrzejczak, and Kaitlyn Kobos

Community Partner:

Randolph Elementary
randolph.livoniapublicschools.org

The goals of this project included reaching out to the greater learning community to promote respect, collaboration, responsibility, and leadership, while advancing literacy. Specifically, University Education students in the Ford Community Corp engaged students through creating learning experiences that focused on seven habits that are common traits of leaders (taken from *The Leader in Me* by Stephen Covey). This series of lessons took place in four 2nd grade classrooms at a high-needs elementary school.

Each of the Madonna Education Team's visits targeted one of the seven habits. The Team selected books that exemplified the habits taught, led each class in a discussion of the habit, and created an activity to reinforce what was learned. Team members benefitted by enhancing their abilities to create and implement lessons and authentic activities. The 2nd graders benefitted because the reinforcement of the habits through continuity of instruction between the classroom teachers and the Madonna Education Team helped them to engage more deeply with the habits. By the end of the term, the 2nd graders will be able to list the habits and give examples of what they can do to become good leaders.



Team #4: Mosaic Leadership Academy

Orlando Chatman, Maxwell Dequonte, Dorian Riley, and Dana Vance

Mentor: Claire Ofiara, Director of Mosaic Leadership Academy

Community Partner:

Brilliant Detroit
brilliantdetroit.org

The team's goal is to develop a video for Brilliant Detroit where they tell their story, mission, values, accomplishments and vision. The goal is to upload the video in social media or any other platform for marketing purposes or advancement. Every member of this team is currently enrolled in the Broadcast and Cinema Arts major.



Team #5: Science

Bianca Hasani, Sarah Knapp, Stephanie Langa, and Nicole Lauria

Mentor: Prof. Veronica Riha, Professor of Biology and Interim Chair of Biology

**Community Partner: Saint Vincent Sarah Fisher Center
www.svsfcenter.org**

The Science Team project is focused on teaching children about science and the value of long-life education. The team's goal is to show children the applicability of science in everyday life. The children the team serves sometimes do not have role models that would encourage them to value education. The team programs hands-on science experiments that will strengthen math skills at the same time they learn science and research. Examples of experiments include film canister rocket, slime making, tornados, blood sensory box, etc.



Team #6: Social Work

Acire Crayton, Rachel Huard, Katherine Schmaltz, and Jessica Shapiro

Mentor: Dr. Irena Glover, Assistant Professor in the Social Work and Sociology Departments

**Community Partners: Detroit Rescue Mission Ministries (DRMM)
drmm.org**

The Social Work team created a sustainable job readiness program for the DRMM. The deliverables included a training manual for the IJDP program and a handbook for the residents for each job category. As well, our students worked on providing job skills training, job readiness training and educational assistance. Lastly, they worked with the DRMM staff to create necessary documentation in order to collect outcome metrics.



SYMPOSIUM FOR RESEARCH, SCHOLARSHIP AND CREATIVITY AWARDS

College of Arts and Humanities

Livonia Civic Chorus Scholarship Award

Shacai Pittman

School of Business

Michael F. McManus Jr. Award for Leadership and Scholarship

Brenden Delaney – Undergraduate recipient
Noura Khreis – Graduate recipient

College of Education

Learning Outcome Assessment Plan (LOAP) Award

Amy Fraser
Erica Marcos
Cassidy Minghine
Tanya Owen
Lauren Theobald
Kacey Tulley

College of Natural and Social Sciences

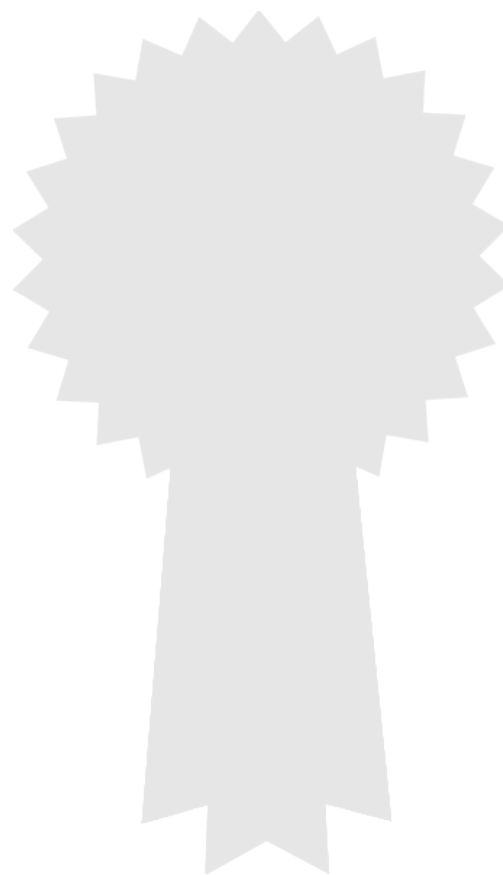
CNSS Research Excellence Award

Alyssa Buffa – Food Science
Madelyn Klebba – Psychology
Jessica Sykes – Forensic Science

College of Nursing and Health

Franciscan Values Award for Graduate Nursing

Sheri Houghland



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Thank you to our poster presentation judges

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Kevin Eyster

Karen Obsniuk

Susan Toma

Marciano Gongora

Sue Ann Sharma

Sarah Twitchell

Sau Mui Lau

Sue Anne Sweeney

Stewart Wood

Thank you to our Symposium photographers

Kathleen Thompson

Stewart Wood

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is to provide leadership, coordination and support to faculty in identifying, securing, and managing resources to solve real-world problems. To encourage multi-disciplinary research, scholarship and creative endeavors that benefits the University's faculty, staff, students, alumni and community members.