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**ACF 2014 April - June Presentations**

**Adkins, Tyler**

April - June FY14

19th Annual Undergraduate Philosophy Conference at SUNY Oneonta

"Effort-Responsibility: A Reply ti Robert Kane's Theory of Freedom"

No Abstract.

**Applebach, Brett**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

The purpose of this study was to identify barriers to healthcare that will exist after implementation of the Affordable Care Act (ACA) and to address the potential effect of the ACA on a free health clinic. Methodology: This study is a case control exploratory study to investigate the barriers that will still exist to patients currently receiving care at an urban free health clinic after the implementation of the ACA. A survey was generated based on barriers to health care, Medicare accessibility, and knowledge of the ACA. In addition, demographic information was included on the survey to which included medical care needs, gender, permanent residence, income, and household size. Over a three-month time frame, the survey was offered to adults who were seeking care at an urban free clinic. A total of eighty-seven surveys were collected. Data was entered into a spreadsheet for analysis using SPSS. Results: Of the 87 surveys completed, 45 were completed by females and 42 were completed by males. The age of the individuals who completed the survey ranged from 19 to 65 years of age. 73 (84%) were US citizens, and 96% had an annual income less than $30,000 with an average household income of 2.5. 43% reported their health as good or excellent, and 57% reported their health as fair or poor. 57% had unmet health care needs while 43% identified that their health care needs are being met. In regard to barriers to health care, an analysis of the survey revealed that the most significant barriers that patients at a free health clinic face are both knowledge and tools to obtain health care access that is available to them. 67% of patients either did not know about or were unsure if they understood the Affordable Care Act. 82.7% reported they believed they would not be or were unsure if they would be eligible for insurance under the ACA but if offered health insurance in 2014, 65% of Oasis of Hope patients would sign up. This barrier to obtaining health care is further supported by the difficulty patients at Oasis of Hope faced when attempting to sign up for Medicaid : 45.8% of patients have applied for Medicaid in the past and 82.4% of these patients were denied. 37.8% reported that the Medicaid application was long and complicated, 23.4% reported difficulty obtaining Medicaid document, and 18.5% said it was hard to apply due to Medicaid hours and difficulty finding transportation. Other barriers that may potentially exist for patients receiving care a free health clinic were identified. 55% of patients would like to continue receiving care at Oasis of Hope even after they obtain insurance indicating comfort at a free health clinic and the role of the patient-provider relationship in obtaining health care. Several patients still expressed concerns about the affordability of health care even after the implementation of the ACA. This is a potential concern for medication co-pays that will still exist for the 59% of diabetes patients, 34% of hypertension patients, and 41% of high cholesterol patients that primarily come to Oasis of Hope for the drug prescription assistance program. Conclusion: The ACA was developed to provide health care to all individuals through government subsidized or government assistance. However, the results of this study identified that there is a lack of knowledge of the ACA from individuals who could benefit from government assistance. In addition, the survey identified that the process of obtaining health care coverage is difficult as well as time consuming. Based on the findings of this survey, the free clinic has obtained computers and volunteers to assist their patients with navigating through the application for health care assistance.

**Barnhart, Kyle**

April - June FY14

Association of American Geographers Annual Meeting

"Park Equity and Green Access in Three Midwestern Cities"

High quality accessible parks play a vital role in urban livability. Urban planners have cited parks as a remedy for issues ranging from crime to climate change and touted their effectiveness as a strategy in revitalization, tourism and civic engagement. Growing research suggests that the positive effects of parks on physical health, in particular, are linked to green and recreational spaces with particular functions and design as well as size and accessibility. Unfortunately, the spatial distribution of parks with these various attributes is not always equitable. This paper compares the park systems of three mid-sized cities in the Great Lakes region of the United States with a focus on discrepancies in park accessibility, size, and function in low vs. high income census districts. GIS mapping is applied to provide a database on park accessibility and quality in the cities of Aurora, Illinois, Cincinnati, Ohio, and Grand Rapids, Michigan. The results are analyzed in the light of literature showing the impacts of accessibility, size and function on levels of physical activity and environmental quality. In Grand Rapids, for instance, tree coverage is lower and average park size smaller in lower income regionsplaces that, at the same time, have greater exposure to highway and factory particulate matter. The overall purpose of this research is to show the implications of neglecting spatial equity especially with regard to green spaces and to inform parks policy where cities are faced with prioritizing the spending of limited funds.

**Becker, Carson**

April - June FY14

2014 American Occupational Therapy Association, Inc. (AOTA) Annual Conference & Expo

"Teaching Interprofessional Education (IPE) Core Competencies Through An International Service Learning Experience"

The purpose of this presentation is to guide OT educators understanding of how to use an Interprofessional Education (IPE) teaching method within an International Service Learning context to develop student competencies in ethics, roles, communication, and teamwork.

**Blake, Travis**

April - June FY14

2014 University System of Georgia Teaching and Learning Conference: Best Practices for Promoting Engaged Student Learning

"Final Collaborative Projects that engage students in Experiential Learning: The case of a"

Travis Blake Emily Cameron Dr. Natalia Gómez. Experiential Learning is one of the most engaging teaching practices that educators can bring into the classroom. Having this in mind, we would like to present a collaborative project that was completed during Prof. Natalia Gómezs Spanish 313 (Latino/a Civilization and Culture) at GVSU. Students taking this course were asked to finish a Final Project to complete the requirements of the class. The students were to choose among three diverse projects to finish the Final Project. They could do community services; they could create a blog in pairs in which they were asked to critically analyze five topics studied in the class. And finally, they could collaboratively create a reality video of a Latino/a living in the Grand Rapids community. One of the main objectives of this Final Project was to give the students the opportunity to use their main fields of study. For the purpose of this conference, my students, Travis Blake, Emily Cameron and I will show the third Final Project option, the creation of a reality video in groups of two. The video project option was given to students who were studying Spanish but also Film and Video Productions. During the presentation the students and I will talk about the importance of engaging students in a collaborative and interdisciplinary project. The project we will present required active learning where students integrated academic knowledge into a practical reality: students were critically thinking about the material that had been taught, they were engaged in problem based-learning, they collaboratively put into practice what they had learned and they applied their learning within diverse communities outside the classroom.

**Bos, Veronica**

April - June FY14

American Society for Clinical Laboratory Science-Michigan (ASCLS-MI) 2014 State Convention

"Comparison of Group B Strep Detection Methods"

The objective of our study is to assess the results of GBS testing using three rapid methods and compare them to the results of a routine culture on the same specimen. The three rapid tests to be used are Illumigene GBS by Meridian, AmpliVue GBS by Quidel, and Smart GBS by Cepheid. We will be looking at the accuracy, turnaround time, and cost of each in order to see which test offers the best balance of these traits. The vaginal/rectal specimens that come into the lab for screening from patients at 35-37 weeks gestation will be used for the tests. We will use the results from the micro department for the cultures and follow the manufacturer instructions for the rapid tests. The Illumigene GBS has a shorter run time on the machine, but since it requires the specimen be enriched in carrot or LIM broth for 18-24 hours first, we suspect the fastest overall turnaround time will be that of the Smart GBS system, which uses specimen from the swab directly. According to the FDA, specificity and sensitivity are quite close for the rapid tests, so we don't predict much difference there. As far as cost, we suspect that cost will be higher for the Smart GBS compared to Illumigene GBS. As we do not yet know the actual cost difference or performance level, we cannot yet make a decision on which test is better overall.

**Brehm, Chelsea**

April - June FY14

American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) 2014 National Coaching Conference

"Sustaining Standards Based Coaching Education in an Urban, Low-Income School District"

This presentation will discuss outcomes of a justice based coaching education collaborative between Grand Rapids Public Schools (GRPS), a large, urban, low-income district in Michigan and Grand Valley State University (GVSU) Coaching Education faculty. GRPS received a multi-million dollar grant in 2009 to fund the Academic and Athletic Enhancement Project (AAEP) which included a long-term plan strengthen district athletic staff leadership and coaching. In an effort to help GRPS achieve this goal, GVSU faculty introduced the NASPE standards to administration and assisted them in organizing standards based coaching education workshops for their coaching staff (over 300 coaches) beginning in 2010. In winter 2012, evaluative/ needs assessment data was collected to provide direction for future initiatives. Fifteen current GRPS coaches were interviewed using a standardized, open-ended interview script (Patton, 2002). Coaches were asked to discuss why they participated in the workshops, how they had incorporated content from workshops into their coaching, what the strengths/weaknesses of workshops were, topics they would like to learn more about, and changes they would like to see in coaching education initiatives. Interviews were transcribed; data was coded, and then analyzed using inductive and deductive analysis to affirm appropriateness and organization of themes (Patton 1987, 2002). Coaches reported they attended workshops to improve skills and better serve kids. They also stated they had incorporated several new ideas and suggested the strengths of the workshops were educational aspects and networking opportunities. A major weakness cited was that information lacked breadth and depth relevant to the low-income, at risk environment they work in. Finally, the major change coaches wanted was for future workshops be more sport (Xs and Os) specific. Results will be further discussed as they relate to organizing and sustaining long-term NASPE standards based education programs for coaches in an urban, low-income setting.

**Cameron, Emily**

April - June FY14

2014 University System of Georgia Teaching and Learning Conference: Best Practices for Promoting Engaged Student Learning

"Final Collaborative Projects that engage students in Experiential Learning: The case of a "reality" video of a Latino in Grand Rapids"

Travis Blake Emily Cameron Dr. Natalia Gómez. Experiential Learning is one of the most engaging teaching practices that educators can bring into the classroom. Having this in mind, we would like to present a collaborative project that was completed during Prof. Natalia Gómezs Spanish 313 (Latino/a Civilization and Culture) at GVSU. Students taking this course were asked to finish a Final Project to complete the requirements of the class. The students were to choose among three diverse projects to finish the Final Project. They could do community services; they could create a blog in pairs in which they were asked to critically analyze five topics studied in the class. And finally, they could collaboratively create a reality video of a Latino/a living in the Grand Rapids community. One of the main objectives of this Final Project was to give the students the opportunity to use their main fields of study. For the purpose of this conference, my students, Travis Blake, Emily Cameron and I will show the third Final Project option, the creation of a realityvideo in groups of two. The video project option was given to students who were studying Spanish but also Film and Video Productions. During the presentation the students and I will talk about the importance of engaging students in a collaborative and interdisciplinary project. The project we will present required active learning where students integrated academic knowledge into a practical reality: students were critically thinking about the material that had been taught, they were engaged in problem based-learning, they collaboratively put into practice what they had learned and they applied their learning within diverse communities outside the classroom.

**Crawford, Kelsie**

April - June FY14

2014 American Occupational Therapy Association, Inc. (AOTA) Annual Conference & Expo

"Teaching Interprofessional Education (IPE) Core Competencies Through An International Service Learning Experience"

The purpose of this presentation is to guide OT educators understanding of how to use an Interprofessional Education (IPE) teaching method within an International Service Learning context to develop student competencies in ethics, roles, communication, and teamwork.

**Dingess, Ashley**

April - June FY14

American Society for Clinical Laboratory Science-Michigan (ASCLS-MI) 2014 State Convention

"Testing Coagulation Centrifuge Criteria to Improve Turnaround Time in the Laboratory"

This comparison study examined the coagulation centrifugation methods for Prothrombin time and Partial Thromboplastin Time at manufacturers recommended setting and at a stat spin for a lower period of time. The manufacturers recommending setting is 3000g for 10 minutes and the stat spin was set at 5000g for 4 minutes. Stat spin criteria was determined by checking for platelet poor plasma (PPP) after centrifugation with the Coulter hematology instrument to make sure the platelet counts in the plasma were all under 10,000. Once centrifuged, we ran the samples on the coagulation instrument and compared results. Our hypothesis was that stat would produce results that were not significantly different than that of the manufactures recommended spin time and speed. This study is useful in providing data to the lab which in turn lowers turnaround for the laboratories, one of the primary ways to gauge performance.

**Disler, Lindsey**

April - June FY14

The Future of Religion: Witnessing and Confessing in Modernity and Post-Modernity

"Witnessing and Confessing in Action"

The purpose of this article is to analyze theories that address the acts of witnessing and confessing as well as how these two acts interrelate for the purpose of creating a dialogue between academia and the rest of the population who are not well versed in these theories. This is in an effort to shape society positively for people through what secular humanists refer to as the categorical imperative and what the religious refer to as the golden rule,an ethical pillar of all the major world religions. Witnessing the world around us is a common act of everyday life, or the action upon what we confess. Confession must be a part of life as well. The confession is not merely the act of saying the problem, but the ultimate act of confession is to do something about it. Through this we can put theory into praxis and influence people to shape society for the better.

**Ertz, Emily**

April - June FY14

National Science Teachers Association (NSTA) National Conference on Science Education

"How Do We Know The Paleozoic Started 542 Million Years Ago?"

No Abstract.

**Eslamian, Sharzad**

April - June FY14

Great Lakes Bioinformatics (GLBIO) Conference 2014

"Supporting omics research, finding gene expression changes over time"

No Abstract.

**Fedewa, Erica**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"The Potential Effect of the Affordable Care Act on a Free Clinic and Potential Barriers to Health Care Access as Perceived by Patients Receiving Health Care at a Free Medical Clinic"

Purpose: The studys purpose was to identify barriers to healthcare that will exist after implementation of the Affordable Care Act (ACA), and address the potential effect of the ACA on a free health clinic. Methodology: To determine the impact of the ACA on patients who obtain health care at a free clinic, a survey was generated to assess knowledge of the ACA, Medicare accessibility, and barriers to obtaining health care. In addition, demographic information regarding medical care needs, gender, permanent residence, income, and household size was collected. The survey was offered to adults seeking care at an urban free clinic. A total of eighty-seven surveys were collected. Data were entered into a spreadsheet for analysis using SPSS. Results: 87 surveys were completed, 45 by females and 42 by males. Age range of those who completed the survey ranged between 19 to 65 years of age. 73(84%) were US citizens, and 96% had an annual income less than $30,000. 43% reported their health as good/excellent, and 57% reported their health as fair/poor. 57% had unmet health care needs while 43% identified that their health care needs are being met. 67% of patients either did not know about or were unsure if they understood the Affordable Care Act. 82.7% reported they believed they would not be or were unsure if they would be eligible for insurance under the ACA but if offered, 65% of the patients would sign up. The barrier to obtaining health care is further supported by the difficulty patients at the free clinic had when attempting to sign up for Medicaid: 45.8% of patients have applied for Medicaid in the past and 82.4% of these patients were denied. 37.8% reported that the Medicaid application was long and complicated, 23.4% reported difficulty obtaining Medicaid documents, and 18.5% said it was difficult to apply for Medicaid due to limited hours and difficulty finding transportation. 55% of patients would like to continue receiving care at the free clinic even after they obtain insurance. Several patients expressed concerns about the affordability of health care even after the implementation of the ACA. This is a potential concern for medication co-pays that will still exist for the 59% of diabetes patients, 34% of hypertension patients, and 41% of hypercholesterolemia patients that primarily come to Oasis of Hope for the drug prescription assistance program. Conclusion: The ACA was developed to provide health care to all individuals through free or government subsidized health insurance. However, the results of this study identified a lack of knowledge of the ACA from individuals who are currently uninsured seeking care at a free health clinic. In addition, the survey identified that the process of obtaining health care coverage is difficult due to hours of operation, and difficulty navigating the application. With a majority of the patients in the clinic having health care needs unmet and a majority having difficulty navigating government documents to obtain health insurance, there will be patients who may fall through the gaps in the ACA.

**Frostick, Challie**

April - June FY14

2014 Annual Meeting of the Midwestern Psychological Association

"Relationships Between Maternal-Mind-Mindedness, Gender-Stereotypes, and Mother-Child Emotion Talk About Jealousy"

Area: Childrens Socio-Cognitive Development Purpose: With widespread attention turning towards a possible bullying epidemic in the U.S., childrens socio-cognitive understanding about interpersonal rivalry is becoming an increasingly important topic. Research suggests that parent-guided reminiscing about emotional events (Fivush, 2001), and maternal-mind-mindedness (MMM, degree of maternal attention to a childs mental capacities; Meins et al., 1998), are beneficial to childrens social-cognition. Studies of parent-guided reminiscing with preschoolers have found that mothers talk more about emotions with girls than boys, and girls talk more about emotions than boys (Fivush & Buckner, 2000). However, few studies have investigated parent-guided reminiscing with older children about complex emotions like jealousy (a ubiquitous emotion concerning interpersonal rivalry) and lacking research on the influence of MMM. Therefore, this study investigated: (1) whether gendered patterns found in preschoolersand mothersemotion talk occur during middle childhood, (2) whether MMM differentially influences girls and boysemotion talk, and (3) whether mothersgender-stereotyped beliefs influence mother-child emotion talk about interpersonal rivalry. Procedure: Eighty 5-to-11-year-olds (40 girls, 40 boys) and their mothers talked about the childs previous experience of rivalry concerning jealousy. The narratives were coded for both partners use of emotion type. Mothers completed the MMM interview by providing a verbal description of their child. Each child characteristic was coded for both MMM (i.e., proportion of mentalistic attributes) and gender-stereotype (i.e., proportion of gender-stereotyped characteristics for childs sex). Children were given standardized measures of verbal and nonverbal intelligence, and emotion understanding; mothers were given a measure of verbal intelligence. Results: One-way ANOVAs revealed no gender differences in the standardized measures or use of emotional discourse for mothers or children. Differences were found, however, within the maternal descriptions of children: Mothers of sons focused on mentalistic attributes, whereas mothers of daughters focused on female-stereotyped characteristics. Correlation analyses revealed that daughters of mothers who focused on female-stereotyped attributes talked more about sadness. Contrastively, sons of mothers who focused on male-stereotyped characteristics talked more about contempt, and also talked more themselves about their son experiencing contempt and pride. Conclusions/Implications: Results suggest that while MMM may play less of a role in school-age childrens social-cognition, maternal stereotyped-beliefs and maternal-guided reminiscing may continue to influence childrens developing abilities beyond preschool. Our findings may have important implications for understanding the socialization practices behind childrens emotional discourse about childhood rivalry and aggression.

**Gilewski, Carlene**

April - June FY14

Southeastern Section, Geological Society of America (GSA) 63rd Annual Meeting

"P-T-T PATH CONSTRAINTS DURING DEFORMATION WITHIN THE CHUNKY GAL MOUNTAIN FAULT, CENTRAL BLUE RIDGE, NORTH CAROLINA"

The Chunky Gal Mountain Fault (CGMF) is located within the Central Blue Ridge province of the Southern Appalachians. This terrane-bounding fault lies adjacent to the Buck Creek-Chunky Gal mafic-ultramafic complex (BCC), an ocean crustal fragment that experienced peak (Taconian) conditions of ~ 825°C, 1.2 GPa. At the type locality, the CGMF is characterized by several focused shear zones along the boundary between BCC amphibolites and garnet-biotite or sillimanite-garnet-biotite gneisses. CGMF samples preserve complex physical and chemical textures that may help constrain the emplacement history of the BCC. A biotite gneiss ultramylonite (sample 11L3), with a shallow lineation and sinistral asymmetry includes garnet, K-feldspar, plagioclase, and muscovite porphyroclasts and accessory ilmenite, rutile, and monazite. EPMA monazite geochronology indicates a range of ages for monazite growth. The ages of cores of larger monazite grains and those preserved as garnet inclusions cluster around 470 Ma. The small matrix monazites and low Y rims of larger grains display asymmetry consistent with growth during mylonite formation and cluster around an age of ~ 450 Ma. Complex garnet zoning in 11L3 and other CGMF samples suggests preservation of prograde zoning (increasing Mg/decreasing Ca) similar to large garnets at Winding Stair Gap (WSG) where peak granulite facies are documented. However, a distinct increase in Ca and Mn toward the rims, which has not been previously reported in the area, is distinctive in 11L3 and other CGMF rocks. We estimate peak metamorphic conditions of ~ 800°C and > 0.8 GPa, similar to conditions at WSG, using TWQ thermobarometry and Theriak-Domino pseudosections. Retrograde temperatures of ~ 600°C are estimated from Garnet rim/adjacent biotite. Preliminary P-T-t modeling of garnet zoning (Gibbs program) suggests that prograde growth is characterized by a slight increase in temperature and distinct decrease in pressure. The increased Ca toward the rim produces a nearly isothermal and sharp increase in pressure. This may indicate significant loading at or near peak temperature conditions, possibly resulting from thrusting across the GCMF.

**Goodrich, Erica**

April - June FY14

PharmaSUG 2014

"P-T-T PATH CONSTRAINTS DURING DEFORMATION WITHIN THE CHUNKY GAL MOUNTAIN FAULT, CENTRAL BLUE RIDGE, NORTH CAROLINA"

A new addition to SAS® 9.4 is the Output Delivery System (ODS) Electronic-Publications (EPUB) destination. ODS EPUB can be used to create SAS® output files for various e-readers on both smart phones (e.g. Samsung Galaxy, Apple iPhone) and tablets (e.g. Apple iPad, and Amazon Kindle). We will discuss how to create SAS® output from varying reporting and graphical procedures alongside free flowing text and ODS EPUB customization options available to create easy to use e-publication files. Some PROCs may be discussed at moderate levels of complexity, however ODS EPUB topics will be discussed at an introductory level.

**Hisler, Garrett**

April - June FY14

Midwestern Psychological Association (MPA) Annual Meeting

"Effects of Processing Style and Message Format on Health Beliefs"

No Abstract.

**Kline, Kimberley**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"Quality of Life Analysis between Premenopausal and Postmenopausal aged Women after da Vinci Robotic Sacrocolpopexy"

The purpose of this study was to compare the postoperative quality of life after the da Vinci robotic sacrocolpopexy procedure for the correction of pelvic organ prolapse (POP) between premenopausal and postmenopausal-aged women as defined by <55 and e55 years of age, respectively. Methodology: Demographics were collected from the first 100 women to receive da Vinci Robotic sacrocolpopexy between the years of 2007 and 2010 from a private obstetric and gynecological practice. Quality of life preoperatively and postoperatively was assessed using a questionnaire known as the Pelvic Floor Impact Questionnaire-Short Form 7 (PFIQ-7). An additional questionnaire, the Pelvic Floor Distress Inventory Questionnaire- Short Form 20 (PFDI-20) was also used to evaluate postoperative symptoms. Surveys were mailed to the 100 women, and 58 surveys were received. Results: SPSS was used to analyze boxplots and histograms; nonparametric statistics were used due to the presence of extreme outliers. An analysis of the PFIQ-7 survey in the entire sample identified that the subjects reported significant postoperative improvement in bowel symptoms (p=0.008) and overall combined symptoms (p<0.0001). For the purpose of comparing the quality of life between premenopausal and postmenopausal women, the sample was age stratified. Women of premenopausal age (<55 years) reported no significant postoperative improvements in bladder (p=0.754), bowel (p-value could not be calculated by SPSS due to pre and post values being identical), vaginal symptoms (p=0.549), or summary scores (p=0.227). Women of postmenopausal age (e55 years) reported significant postoperative improvement in bowel symptoms (p=0.020) and overall summary score (p< 0.0001), but no significant improvements in bladder (p=0.361) or vaginal (p=0.381) symptoms. Conclusions: There was a difference in the type of symptomatic improvement reported by women of pre- and postmenopausal age after undergoing da Vinci robotic sacrocolpopexy for repair of POP. Premenopausal-aged women had no significant improvement in any of the symptom categories, whereas postmenopausal-aged women reported improvement in bowel symptoms and the overall quality of life score. These differences indicate that menopausal-age status may play a role in determining the type of symptomatic improvement after da Vinci robotic sacrocolpopexy to repair POP.

**Koch, David**

April - June FY14

39th Annual International Trumpet Guild Conference

"Trumpet Ensemble Prelude"

The GVSU trumpet ensemble has been invited to play a prelude before an event at the International Trumpet Guild Conference. This is a fantastic opportunity for personal growth as a musician through the conference and to represent Grand Valley State University through our performance.

**Littell, Jamin**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"Quality of Life Analysis between Premenopausal and Postmenopausal aged Women after da Vinci Robotic Sacrocolpopexy"

Objective: To compare the postoperative perceived success of the da Vinci robotic sacrocolpopexy procedure for the correction of pelvic organ prolapse (POP) between premenopausal- and postmenopausal-aged women as defined by <55 and e55 years of age, respectively. Materials and Methods: Demographics were collected from the first 100 women to receive da Vinci Robotic sacrocolpopexy between the years of 2007 and 2010 from a private obstetric and gynecological practice. Quality of life preoperatively and postoperatively was assessed using a questionnaire known as the PFIQ-7. An additional questionnaire, the PFDI-20 was also used to evaluate postoperative symptoms. Surveys were mailed to the 100 women, and 58 surveys were received. Results: SPSS was used to analyze boxplots and histograms; nonparametric statistics were used due to the presence of extreme outliers. An analysis of the PFIQ-7 survey identified that the subjects reported significant postoperative improvement in bowel symptoms (p=0.008) and overall combined symptoms (p<0.0001). Women of premenopausal age (<55 years) reported no significant postoperative improvements in bladder (p=0.754), bowel (p-value could not be calculated), or vaginal symptoms (p=0.549), or summary scores (p=0.227). Women of postmenopausal age (e55 years) reported significant postoperative improvement in bowel symptoms (p=0.020) and overall summary score (p< 0.0001), but no significant improvements in bladder (p=0.361) or vaginal (p=0.381) symptoms. Conclusion: There was a difference in the type of symptomatic improvement reported by women of pre- and postmenopausal age after undergoing da Vinci robotic sacrocolpopexy for repair of POP. These differences indicate that menopausal status may play a role in determining the type of symptomatic improvement after da Vinci robotic sacrocolpopexy to repair POP.

**Long, Justine**

April - June FY14

American Society for Clinical Laboratory Science-Michigan (ASCLS-MI) 2014 State Convention

"Comparison of Group B Strep Dectection Methods"

The objective of our study is to assess the results of GBS testing using three methods and compare them to the results of a routine culture on the same specimen. The three tests to be used are Illumigene GBS by Meridian, AmpliVue by Quidel, and Smart GBS by Cepheid. We will be looking at the accuracy, turnaround time, and cost of each in order to see which test offers the best balance of these traits. The vaginal/rectal specimens that come into the lab for screening from patients at 35-37 weeks gestation will be used for the tests. We will use the results from the microbiology department for the cultures and follow the manufacturer instructions for the rapid tests. Though this study is currently ongoing, we are looking for a valid detection method that will give the most accurate results, therefore providing the patients with the best care. However, we are going to analyze multiple aspects of each method including sensitivity, specificity, turn-around time, tech time, as well as cost of the test and equipment needed. Based on the criteria stated, we will conclude which detection method is the best option for improving patient care.

**Loree, Courtney**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"Quality of Life Analysis between Premenopausal and Postmenopausal aged Women after da Vinci Robotic Sacrocolpopexy"

The purpose of this study was to compare the postoperative quality of life after the da Vinci robotic sacrocolpopexy procedure for the correction of pelvic organ prolapse (POP) between premenopausal and postmenopausal-aged women as defined by <55 and e55 years of age, respectively. Methodology: Demographics were collected from the first 100 women to receive da Vinci Robotic sacrocolpopexy between the years of 2007 and 2010 from a private obstetric and gynecological practice. Quality of life preoperatively and postoperatively was assessed using a questionnaire known as the Pelvic Floor Impact Questionnaire-Short Form 7 (PFIQ-7). An additional questionnaire, the Pelvic Floor Distress Inventory Questionnaire- Short Form 20 (PFDI-20) was also used to evaluate postoperative symptoms. Surveys were mailed to the 100 women, and 58 surveys were received. Results: SPSS was used to analyze boxplots and histograms; nonparametric statistics were used due to the presence of extreme outliers. An analysis of the PFIQ-7 survey in the entire sample identified that the subjects reported significant postoperative improvement in bowel symptoms (p=0.008) and overall combined symptoms (p<0.0001). For the purpose of comparing the quality of life between premenopausal and postmenopausal women, the sample was age stratified. Women of premenopausal age (<55 years) reported no significant postoperative improvements in bladder (p=0.754), bowel (p-value could not be calculated by SPSS due to pre and post values being identical), vaginal symptoms (p=0.549), or summary scores (p=0.227). Women of postmenopausal age (e55 years) reported significant postoperative improvement in bowel symptoms (p=0.020) and overall summary score (p< 0.0001), but no significant improvements in bladder (p=0.361) or vaginal (p=0.381) symptoms. Conclusions: There was a difference in the type of symptomatic improvement reported by women of pre- and postmenopausal age after undergoing da Vinci robotic sacrocolpopexy for repair of POP. Premenopausal-aged women had no significant improvement in any of the symptom categories, whereas postmenopausal-aged women reported improvement in bowel symptoms and the overall quality of life score. These differences indicate that menopausal-age status may play a role in determining the type of symptomatic improvement after da Vinci robotic sacrocolpopexy to repair POP.

**Lott, Sarah**

April - June FY14

American Society for Clinical Laboratory Science-Michigan (ASCLS-MI) 2014 State Convention

"Improving the Quality of Life in Treating Cystinosis with Procysbi"

Cystinosis is a rare autosomal recessive disease that causes cystine to accumulate in cell lysosomes. Due to the lack of transport proteins, the cell is unable to expel cysteine resulting in an abundance of cysteine crystals in all tissues, particularly to the kidneys and eyes, causing damage as well as metabolic imbalance. Cysteamine bitartrate (trade name Cystagon) was found to enable the transport of cysteine out of the lysosomes and is currently the only treatment option for cystinosis patients. Typical treatment involves taking a large number of pills divided into four daily doses, every six hours through the day and night, to maintain < 2 nmol ½ cystine level in the WBC. Recently, a new extended-release form of cysteamine was FDA approved that allows dosing at twelve hour intervals, and may result in a decrease in GI symptoms and patient compliance. Our case study will examine whether the twice-daily regimen of Procysbi will be as effective in regulating cystine levels as the six hourly dosage with an improvement in GI symptoms and overall quality of life.

**Machiela, Jenna**

April - June FY14

American Society for Clinical Laboratory Science-Michigan (ASCLS-MI) 2014 State Convention

"Comparison of Group B Strep Detection Methods"

The objective of our study is to assess the results of GBS testing using three methods and compare them to the results of a routine culture on the same specimen. The three tests to be used are Illumigene GBS by Meridian, AmpliVue by Quidel, and Smart GBS by Cepheid. We will be looking at the accuracy, turnaround time, and cost of each in order to see which test offers the best balance of these traits. The vaginal/rectal specimens that come into the lab for screening from patients at 35-37 weeks gestation will be used for the tests. We will use the results from the microbiology department for the cultures and follow the manufacturer instructions for the rapid tests. Though this study is currently ongoing, we are looking for a valid detection method that will give the most accurate results, therefore providing the patients with the best care. However, we are going to analyze multiple aspects of each method including sensitivity, specificity, turn-around time, tech time, as well as cost of the test and equipment needed. Based on the criteria stated, we will conclude which detection method is the best option for improving patient care.

**Meirow, Danielle**

April - June FY14

"Midwest Undergraduate Conference in Gender

Studies: Bursting Gender's Bubble, An Interdisciplinary Gender Studies Conference"

"The Leaky Pipeline: Women Pursuing Careers in Medicine"

Since the passage of Title IX in 1972, womens educational and career opportunities have expanded drastically in the United States, however, research has shown that women pursue post-baccalaureate and graduate level education at lower rates than men, and that when they do enter graduate school, they are more likely to drop out of their programs. The metaphor of a leaky pipeline has been used to explain this phenomenon. This study will draw on the leaky pipeline effect to study students in their undergraduate years who hoped to become a physician upon entering college, but have since changed their career aspirations. Additionally, it will investigate the causes of this change. Primary data will be collected through an e-mailed survey, while additional in-depth information will be gained through one on one interviews. It is expected that women will have altered their career goals at greater rates than men and that these changes will be due to social pressures placed upon them by those around them.

**Miller, Robert**

April - June FY14

39th Annual International Trumpet Guild Conference

"Trumpet Ensemble Prelude Performance"

The GVSU Trumpet Ensemble has been invited to perform the prelude music for a featured recital of a world renowned artist at the International Trumpet Guild. This is an incredible opportunity to meet other professionals in the trumpet and music circles from around the world. It is also an incredible performance opportunity to perform and refine ones artistry and craft of music performance. Not to mention the great ability this is to sponsor and advertise Grand Valley State University on an international stage, to other professionals, students, and future students.

**Munday, Alice**

April - June FY14

6th Annual Symposium for History Undergraduate Research (SHUR)

"Power has Passed : Union Surgeon George M. Trowbridge' s Evolutionary Perceptions of Freedmen During the American Civil War"

Historians have long tried to generalize Union soldiersviews on slavery; however, there seems a plethora of understandings. Our paper utilizes the over 200 sagacious letters George M. Trowbridge, an Assistant Surgeon in the 19th Michigan Infantry, wrote to his wife from 1863-65 to evince the nuances of a Union soldiers views on the peculiar institution during the Civil War. As a well-educated medical doctor, Trowbridge offers canny insights about the complexities and the evolution of his ideas about slavery, race, politics and the wars objectives. We aim to bring to light the individuality of this typical soldier to expose his speckled viewpoints surrounding slavery and emancipation, rather than to categorize his views. Though Trowbridge has limited antebellum interactions with African Americans, this seemingly moderate abolitionist and evangelical Christian from Michigan interacts with freedmen throughout his military service. These interactions militate his assessment of African Americans. Trowbridge goes from being provincial and almost indifferent towards African Americans to becoming more tolerant and excited to see African American troops mettle in fighting for their freedom. The surgeons wartime views cover a broad spectrum. At one point he postulates that blacks were a docile race who would benefit from miscegenation to advance their cerebral acumen. At another point he believes them more intelligent than southern whites. The letters home reveal a personal and vivid picture of the larger narrative of slavery and the Civil War. Trowbridges writings demonstrate the inner conflict and debate he had over the place of freedmen and racial prejudices when he encountered the peculiar institution.

**Phillipich, Jamie**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"Mass Media Influence on Human Papillomavirus Knowledge of College Freshmen"

Many studies have assessed the publics perceptions and acceptability of the Human Papillomavirus (HPV) vaccine, while others have analyzed the medias coverage of the vaccine, however few have specifically assessed the media influence on the perception HPV and vaccine compliance. College freshmen in fall 2013 were the first group of adolescent females targeted by the proposed Gardasil® vaccine guidelines in 2006 for 11-12 year old girls, and the first group of adolescent males targeted in 2009 for 15-16 year old boys. Thus, there is limited data evaluating how this population was educated about HPV and if the media has influenced their perception and acceptance of the vaccine. The aim of this study was to evaluate this populations education about HPV/Gardasil® and determine if the media had an increased role in their reception of HPV knowledge and if the media influenced their reception of the HPV vaccine, Gardasil®. Methods: One thousand randomly selected 18-19 year old freshmen students at Grand Valley State University were invited to participate in this cross-sectional quantitative pilot study using an on-line, anonymous questionnaire. The 48 question survey evaluated participant demographics, basic STD knowledge and perceptions, HPV knowledge, personal sexual behaviors, acquisition of sexual health information, knowledge about Gardasil®, vaccination barriers, and vaccination status. Pearson Chi-Square tests, score development, Mann-Whitney, and Spearmans rank correlation were tools used to analyze the data. Results: One hundred forty six students completed the survey. The majority of participants were female (69.2%) and white, non-Hispanics (87.7%). The study revealed 68% of respondents reported obtaining HPV and Gardasil® related information from the media, and 37% of respondents felt that the information presented in the media was not believable. Respondents reported receiving the most believable HPV-related information from health education classes and healthcare providers. An HPV knowledge score was developed and Mann-Whitney analysis revealed that neither gender (p-value=0.619), vaccination status (p-value=0.417), nor parents having a college degree (p-value=0.210) had a significant impact on HPV knowledge. Additionally, a health score analyzed the amount of interaction between healthcare providers and media exposure students received. A Mann-Whitney test revealed gender had a significant impact (p-value<0.001) on the health score, with females outscoring (M=3.27, SD=1.054) males (M=2.36, SD=1.125). Individuals who received the vaccine scored significantly higher (M=3.64, SD=0.586, p-value<0.001) than those who did not receive the vaccine (M=2.45, SD=1.234). Additionally, 41% of the respondents had a health score of 100%, with 25% of this subset reporting receiving the vaccine. Thus, despite receiving all the health information about Gardasil®, 75% had not been vaccinated. Conclusion: The results of this study suggest that regardless of the amount of interaction students had with healthcare providers and/or the media, it did not affect their overall knowledge of HPV or Gardasil®. It is imperative as providers, to impart accurate, honest information with patients and their families so they have information necessary to make informed decisions about their health, particularly in regards to HPV information and the Gardasil® vaccine.

**Phillips, Kristy**

April - June FY14

Joint Aquatic Sciences Meeting 2014

"Unionids: Their Current Status, Association with Macroinvertebrates and Population Dynamics at Cedar Creek"

The decline in mussel populations in North America has been attributed to land-use modifications and unionids are endangered and likely to become extirpated. Our project investigated the status of the unionid community in a 3rd order stream and examined their relationship with aquatic macroinvertebrates. Multiple variables were compared to mussel patches. We sampled 18 randomly chosen sites within 2 separate 100-meter reaches at Cedar Creek and compared unionid and macroinvertebrate diversity, density, and richness. Variables measured included transport OM, chemistry, substrate; and biological samples included benthic macroinvertebrates (0.25m2) and unionids (n=144). Mussel density was positively correlated with macroinvertebrate density (p=0.003, R=0.783) and substrate composition correlated with the higher mussel density and consisted of a mixture of gravel, cobble, sand, and Vallisneria. Sample sites that had little/no mussels present had one or two dominate types of substrate.

**Smit, James**

April - June FY14

Joint Aquatic Sciences Meeting 2014

"SEDIMENT NUTRIENT FLUX IN RESPONSE TO HYDROLOGIC RECONNECTION AND CLIMATE CHANGE"

Wetland restoration and creation activities are common practices in todays world. The intent of these activities is to restore the ecosystem services that wetlands provide such as flood prevention, sediment retention, and water quality improvement through the sequestration of nutrients such as nitrogen and phosphorus. However, wetlands restored on former agricultural land may act as a source of these nutrients to the water column rather than a sink. This study involves a parcel of land that was originally a deltaic wetland that was converted to farmland, and is now designated for wetland restoration. Our goal is to determine if the sediments in question will serve as a source or sink of nutrients once the wetland is hydrologically reconnected to an adjacent stream. This project also examines how increased temperature, a phenomenon that is expected to occur through the century, will affect nutrient exchange between the water column and sediment. Lab-based experiments, using sediment and water from the study area, were performed to simulate different reconnection scenarios and both phosphorus and nitrogen water column concentrations were monitored over time.

**Sunny, Nadia**

April - June FY14

121st American Society for Engineering Education (ASEE) Annual Conference & Exposition

"Ethics of Regulated Biomedical Device Design"

Safety and welfare of human beings is the top priority of all codes of ethics for engineers. At the same time, market wants more useful and effective products from engineers in no time. Engineers working directly with the health sector, i.e. biomedical engineers, often have to struggle in making design choices to balance these demands for the very sensitive nature of the sector. Regulation and monitoring for this field of engineering is more heightened than any other for the same reason. This adds to the biomedical device design engineers list to comply with, or risk to be alleged for. Literature shows that biomedical engineers usually go through a number of dilemmas in different stages of a device design. Examples of these dilemmas include: sufficient safety of the user, need for clinical trials, and confidentiality level of the patients data. These are examples of the issues reported as unresolved in most cases. While the regulator, the Food and Drug Administration (FDA), wants the device and its development process to be full-proof, and the code of ethics wants these to be ethical, the design engineer is left to make a balanced and correct choice. The fact that these issues end up being unresolved reveals a multifold opportunity for improvement. First, the existing code of ethics for biomedical engineers, from the Biomedical Engineering Society (BMES), is not currently adequate, with its broad nature, to help the engineer find a balanced decision and yet design a device that is safe and effective. Second, the education of biomedical engineers, particularly in the area of ethics, seems to be insufficient to equip them with what they need to overcome these hurdles. Third, the regulatory process in spirit agrees with the code but includes its own challenges. This calls for an in-depth study of the ethical issues encountered in biomedical device design as well as additional clarification of the code of ethics, which influences both the student and the practicing engineer. It also calls for a check on the curriculum content related to the area of ethics and regulations, within biomedical engineering education programs. Screening through twenty leading universities shows evidence of ethics studies in engineering within different courses. However, presence of a thorough study on biomedical engineering ethics, for instance a dedicated ethics course, is found in only one of them. Based on these findings, it is recommended that a weighty inclusion of studies on ethics, integrated with regulation, be part of the curriculum of biomedical engineering education. Recommendations to improve the existing code of ethics in this field are proposed as well as a discussion of integrating the code and the FDA regulation in the curriculum for biomedical engineers, to improve the situation. Keywords: Biomedical engineering, engineering ethics, biomedical device design, medical device regulation, device licensing.

**VanNoord, Tyler**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"The Potential Effect of the Affordable Care Act on a Free Clinic and Potential Barriers to Health Care Access as Perceived by Patients Receiving Health Care at a Free Medical Clinic"

The studys purpose was to identify barriers to healthcare that will exist after implementation of the Affordable Care Act (ACA), and address the potential effect of the ACA on a free health clinic. Methodology: To determine the impact of the ACA on patients who obtain health care at a free clinic, a survey was generated to assess knowledge of the ACA, Medicare accessibility, and barriers to obtaining health care. In addition, demographic information regarding medical care needs, gender, permanent residence, income, and household size was collected. The survey was offered to adults seeking care at an urban free clinic. A total of eighty-seven surveys were collected. Data were entered into a spreadsheet for analysis using SPSS. Results: 87 surveys were completed, 45 by females and 42 by males. Age range of those who completed the survey ranged between 19 to 65 years of age. 73(84%) were US citizens, and 96% had an annual income less than $30,000. 43% reported their health as good/excellent, and 57% reported their health as fair/poor. 57% had unmet health care needs while 43% identified that their health care needs are being met. 67% of patients either did not know about or were unsure if they understood the Affordable Care Act. 82.7% reported they believed they would not be or were unsure if they would be eligible for insurance under the ACA but if offered, 65% of the patients would sign up. The barrier to obtaining health care is further supported by the difficulty patients at the free clinic had when attempting to sign up for Medicaid: 45.8% of patients have applied for Medicaid in the past and 82.4% of these patients were denied. 37.8% reported that the Medicaid application was long and complicated, 23.4% reported difficulty obtaining Medicaid documents, and 18.5% said it was difficult to apply for Medicaid due to limited hours and difficulty finding transportation. 55% of patients would like to continue receiving care at the free clinic even after they obtain insurance. Several patients expressed concerns about the affordability of health care even after the implementation of the ACA. This is a potential concern for medication co-pays that will still exist for the 59% of diabetes patients, 34% of hypertension patients, and 41% of hypercholesterolemia patients that primarily come to Oasis of Hope for the drug prescription assistance program. Conclusion: The ACA was developed to provide health care to all individuals through free or government subsidized health insurance. However, the results of this study identified a lack of knowledge of the ACA from individuals who are currently uninsured seeking care at a free health clinic. In addition, the survey identified that the process of obtaining health care coverage is difficult due to hours of operation, and difficulty navigating the application. With a majority of the patients in the clinic having health care needs unmet and a majority having difficulty navigating government documents to obtain health insurance, there will be patients who may fall through the gaps in the ACA.

**Webb, Margaret**

April - June FY14

American Academy of Physician Assistants (AAPA) IMPACT 2014: Charting a Course

"Mass Media Influence on Human Papillomavirus Knowledge of College Freshmen"

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