**DNP Scholarship Day**  
**Thursday, April 13, 2017**  
**University of Wyoming / Coe Library Room 506**

### Additions to Program

**Thomas Lab Research Team**

Above, some members of the Thomas Lab Research Team make last minute touchups in preparation for today’s presentation. (l-r, students Taylor Chaulk-Pikula (Kinesiology & Health), Kimberly Burbank (Zoology & Physiology), Tessa Woods (Pharmacy), and nursing faculty Jenifer Thomas, PhD.

The Thomas Lab Research Team will present their research on the following topic: **Lifestyle Health-Related Self-Concept in the Context of a Lifestyle Intervention**. Please see page 15 of this booklet for their abstract.

**Siphesihle Patience Vilakazi**

We welcome nurse and nurse educator Siphesihle Patience Vilakazi from Mpumalanga, South Africa. While practicing in rural and urban areas of South Africa, Vilakazi has specialized in midwifery and the treatment and prevention of HIV/AIDS. Her current position is Senior Midwife at Netcare Sunninghill Hospital in Johannesburg.

### Updated Program Agenda

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Dean and Professor |      |
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Paul F. Cook, PhD  Distinguished Roy & Fay Whitney Lecturer

Paul Cook is a licensed psychologist and associate professor at the University of Colorado College of Nursing.

Dr. Cook has an active program of research on medication adherence. He has been principal investigator on grants from the National Institutes of Health and private industry, and has chaired his college’s research committee. In addition, Cook is the program evaluator for the 10-state Mountain West AIDS Education and Training Center. In a previous position, Cook was responsible for all quality improvement activities in the Specialty Division of Centene Corporation, a private sector Medicaid HMO.
**Haley Nielsen**  
DNP Candidate

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**Introduction:** Health literacy is the degree an individual has the capacity to obtain, communicate, process, and understand basic health information and services in order to make appropriate health decisions. Only about 12% of adults have proficient health literacy such as interpreting prescription labels correctly and understanding the purpose of medication. Currently, screening for health literacy is not a routine assessment as part of the admission process, leaving individuals with poor health literacy unnoticed. Compared to their counterparts such individuals, are at a higher risk for poor health outcomes, internal medication errors, hospital readmissions, and lack the ability to self-manage care when discharged from a healthcare facility.

**Purpose:** This quality improvement (QI) project evaluated a system level improvement focused on identifying patients with poor health literacy at a small, community hospital. The objective of this projective was to screen patients for poor health literacy and provide pharmacy led discharge teaching and reconciliation to improve patient understanding of discharged medications and the intended purpose of the medications.

**Methodology:** English speaking individuals of at least 18 years of age, admitted to a small rural hospital from December 1, 2016 to March 1, 2017, were screened for health literacy by the Rapid Estimate of Adult Literacy in Medicine-Revised (REALM-R). Staff nurses administered the REALM-R as part of the admission process. The nursing staff reviewed and scored the questionnaire. A positive screen based on the scoring guidelines of the REALM-R, would indicate to the nurse that a pharmacy consult needed placed for medication reconciliation and education throughout the admission and upon discharge. Additionally, the staff nurses answered a questionnaire to assess the ease and feasibility of the REALM-R in clinical practice. The quantitative data collected was used to evaluate whether screening for health literacy and implementing pharmacy medication teaching would result in any improvement of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. The specific measure of this QI project was if patients answered “agreed” or “strongly agreed” on the HCAHP survey question, “When I was discharged from the hospital, I clearly understood the purpose of taking each of my medications.”

**Results, Discussion, and Implications:** Will be shared during the presentation.
James T. Kuster  
DNP Candidate 

Sarah A. Smith  
DNP Candidate 

Introduction: Individuals living in rural America continue to be negatively affected by the shortage of mental health services. Accessibility of these services is difficult due to many factors including geographic barriers and lack of mental health providers in rural areas. The availability of telemental health services (TMH) has been beneficial in improving access to mental health services in these areas.

Purpose: The aim of our research was to conduct a systematic review of systematic reviews to determine the clinical effectiveness of TMH versus face-to-face mental health services.

Methodology: An evidence-based methodological approach was followed in identifying and appraising published reviews systematically. The AMSTAR was used to assess reliability and validity of each systematic review.

Results: Six systematic reviews with ratings of moderate to high methodological quality met the inclusion criteria. The studies included in the reviews lacked rigorous methodological design, had small sample sizes, and lacked specific controlled comparison groups.

Discussion: The evidence to support the superiority of TMH or face-to-face services is lacking. The evidence does, however, suggest TMH is effective in improving symptoms and overall health of patients. Therefore, TMH is a viable option when FTF services are not readily available.

Implications: The findings of this study support the need for further expansion and implementation of TMH services in rural America where face-to-face services are not readily available.
Introduction: The United States has a shortage of primary care providers, particularly in rural and underserved communities. The demand for primary care providers has become critical and nurse practitioners (NPs) are filling this essential role. NPs not only improve access to care in underserved and rural areas, they influence the nation’s healthcare system to meet the expanding healthcare needs of Americans. Although the need for advanced nursing practice grows, many communities remain unfamiliar with the NP title, role, and scope of practice as a provider. Thus it is critical that NPs work to improve community awareness regarding the NP role.

Purpose: Although multiple studies have addressed patient perceptions of and satisfaction with NPs, there has been almost no research of interventions aimed at improving public perceptions and beliefs regarding NPs. Education regarding provider roles and competence may improve patient satisfaction and knowledge. In 2013, the American Association of Nurse Practitioners (AANP) developed an educational campaign regarding the NP role; however, research regarding its effectiveness is lacking. Campbell County, Wyoming is a rural western community in need of healthcare providers willing to commit to practicing within the area. NPs are increasingly filling these needs, however, the community has limited knowledge of the profession. Thus, the purpose of this study was to evaluate change in community opinions and beliefs of NPs through informational presentations based on the AANP’s NP Awareness Campaign to several leadership and advisory councils in a rural, western community.

Methodology: This project utilized pre and post-surveys to examine community thoughts and beliefs of NPs, and whether these perceptions changed after informational presentations and NP awareness infographics. The target audience included leaders and advocates within the rural western community of Campbell County, Wyoming. Informational material included an AANP NP Awareness Campaign Infographic and presentation guided by the AANP NP Awareness Campaign material and peer-reviewed research studies. Assessment tools included a short pre-survey and post-survey. Surveys used a Likert-scale and consisted of 12 items pertaining to participants’ thoughts and beliefs of NPs. Data from the pre-surveys and post-surveys were compared for each item.

Results, Discussion, Implications: Will be shared during the presentation.
Introduction/Purpose: A patient portal (PP) is an online website which allows secure access to personal health information and facilitates communication with primary care providers which may result in improved patient health outcomes. Improving PP adoption rates requires understanding of what motivates patients to adopt and what barriers exist for PP usage. This quality improvement (QI) project occurred in a small rural primary care clinic that provides services to persons of all ages and socioeconomic backgrounds. The goal of this QI project was to increase the percentage of adult patients seen during the project time frame who view their personal health information to at least 20%.

Methods: Based on our review of the literature, two evidence-based interventions were initially initiated: 1) usage of common PP language (i.e., consistent PP-related terms) and 2) increased staff-patient discussion of the PPs. The common PP language was developed and translated into a patient specific information sheet which was given to each patient at check in. Staff-patient discussions about the PP were facilitated through a simple tracking sheet system. Additionally, red stop signs were placed on the backs of all doors in the clinic as a reminder for staff to discuss the PP with each patient. Three PDSA cycles were completed in which data were collected through tracking sheets regarding: 1) how many patients logged into the PP and 2) how many of those patients received all four points of contact discussions.

Results: PDSA cycle 1: A total of 72 patients were seen in the clinic. Nineteen out of 72 patients (26%) seen in the first PDSA cycle logged into the PP to view their personal health information. PDSA cycle 2: A total of 173 patients were seen in the clinic. Eleven out of 173 patients (6%) seen in the second PDSA cycle logged into the PP to view their personal health information. PDSA cycle 3: A total of 93 patients were seen in the clinic. Seven out of 93 patients (8%) seen in the third PDSA cycle logged into the PP to view their personal health information.

Discussion: These interventions resulted in an average of 13% adult patients seen during the project time frame logging into the PP and viewing their personal health information. PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%. The resulting increased PP login rates before the interventions was less than 1%

Implications: Developing and using a common PP language was effective and created a partnership and teamwork amongst the clinic staff. Increased staff-patient discussions created a framework for uniform process but allowed each person at the clinic to apply an individual effort. These interventions were inexpensive and customizable. Collectively, they were solutions to low rates of PP usage.
Introduction: An estimated 9.8 million adults in the United States live with serious mental illness (SMI). Individuals with SMI experience a higher rate of preventable physical health conditions, as well as more inequalities in accessing care. Prevalence of diabetes mellitus (DM) in individuals with SMI has been shown to be two to three times higher than in general population, and evidence suggests patients with co-occurring psychiatric illness and DM are less likely to receive standard levels of diabetes care. The prevalence of cardiovascular disease (CVD) in individuals with SMI is also two to three times higher compared to the general population and is the most common cause of death among individuals with SMI. Individuals with SMI are less likely to receive beta-blockers and angiotensin-converting-enzyme inhibitors post MI. These factors lead to premature mortality for individuals with SMI.

Purpose: Individuals with SMI receiving mental health treatment often receive most of their healthcare in the mental health setting. Integrating primary care and behavioral care may improve access to medical care, and potentially prevent those conditions that result in early mortality among individuals living with SMI. This systematic review aimed to determine if integration of primary care into the behavioral health setting can improve health outcomes, and access to care for individuals with SMI.

Methods: PsychINFO, Proquest, PubMed, and CINAHL databases were extensively searched in order to retrieve maximum number of relevant studies. Search terms included “mental disorders AND delivery of health care, integrated,” “serious OR severe mental illness AND health care delivery, integrated,” “serious OR chronic mental disorder AND healthcare OR integrated health systems,” and “serious OR chronic mental illness AND integrated care.” Initial search yielded 442 articles. These were screened for relevance by title and abstract resulting in 37 eligible articles. Using inclusion and exclusion criteria developed for this review, all articles were assessed by two reviewers to ensure they meet the inclusion criteria. Studies were included if they included integration of primary care into the behavioral health setting for adults with co-occurring SMI and chronic medical conditions. In addition, the reference lists of all included studies were examined for applicable articles that may not have been obtained in the initial database search.

Results, Discussion & Implications: Will be shared during the presentation.
Jennifer Husman  
DNP Candidate

Jennifer Husman  
is from  
Cheyenne, Wyoming

**Project Title:**  
Association of Resilience and  
Health-Related Quality of Life in Adults  
Following Adverse Childhood Experiences

**Purpose:** This study seeks to identify whether an adaptive capability, resilience, mediates adult health related quality of life following adverse childhood experiences. Adverse childhood experiences (ACEs) are preventable exposures to abuse, neglect and loss. Research correlates ACEs with increased risk for later negative physical, emotional and social outcomes, resulting in preventable disorders and mortality. However, not all persons with personal ACE histories experience the same later effects, and there is variation in outcomes. The heterogeneity of adult outcomes following ACEs highlights an area ripe for health promotion and disease prevention interventions.

Factors throughout the lifespan can serve as either protective factors, supporting a healthy development and bolstering overall health, or as risk factors, contributing to diminished opportunities and poorer health-related outcomes. Description of the protective factors that affect later life trajectory may inform prevention strategies and help mediate the effects of ACEs in adult health development. One identified protective factor, resilience, is defined as a person’s ability to recover following stress, and involves internal and environmental resources.

Study of adaptive responses following ACEs may inform intervention strategies, and help to maintain or improve later health-related quality of life. Little research to date has investigated these relationships in adults. Examination of these associations is necessary to inform adult health promotion and disease prevention strategies, to improve health outcomes, and to reduce health disparities.

**Subjects:** Participants were recruited from two populations: adults facing food insecurity and/or lack of shelter who utilized support services at a community resource center (n=97), and adults with advanced education who utilized leadership training through a regional organization (n=145). The response rate was 28 percent.

**Design and Setting:** The descriptive study uses quantitative survey data obtained from a questionnaire. Data were collected in two settings: written responses at a community resource center, and online responses through an organization listserv. / **Measures:** Participants were surveyed using a 46-item compilation of four quantitative measures: history of Adverse Childhood Experiences, the Brief Resilience Scale, the Child and Youth Resilience Measure, and the Short-form (12) Health Survey. / **Analysis:** Numeric data were transferred to SPSS 24. Participant responses (n=68) were analyzed using descriptive statistics and regression analysis

**Results, Discussion and Conclusion:** Pending results analyses.
Introduction/Purpose: Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder in women affecting up to 15% of populations. Marked by menstrual dysfunction, polycystic ovaries, and hyperandrogenism, PCOS is associated with an increased risk for insulin resistance, type 2 diabetes, infertility or subfertility, endometrial cancer, cardiovascular disease, depression, and reduced quality of life (Fauser et al., 2012). Many differences in the prevalence, clinical manifestation, and subjective burden of PCOS exist between women of different ethnicities, but studies specific to Native American (NA) women are scant. This study purpose is to assess the perceptions and attitudes of Native American women of the Wind River Indian Reservation (WRIR) regarding women’s health and PCOS. By providing an in-depth, subjective understanding of women’s health and the burden of PCOS on the WRIR, this qualitative study identifies areas for further research and provides insight that will promote the delivery of comprehensive, culturally-competent, and patient-centered care.

Methodology: A focus group was conducted to explore women’s attitudes, thoughts, and perceptions of women’s health on the WRIR. Participants were enrolled Shoshone or Arapaho tribal members between the ages of 18 and 45. The author acted as moderator and two FWWSON faculty members were present during the focus group to take notes. Themes were developed and were presented to each participant individually for member checking. Participant feedback and quotes during the member checking sessions were incorporated into the results.

Results: Five themes that affected women’s health on the WRIR were identified from the focus group data: 1) women’s health is a private matter, 2) lack of knowledge regarding PCOS, 3) lack of confidence in Indian Health Service (IHS), 4) loss of cultural heritage, and 5) intergenerational trauma. The five themes were unanimously supported through member checking.

Discussion & Implications: Will be shared during the presentation.
Introduction: The Human Papilloma virus (HPV) is one of the most common sexually transmitted infections with complications manifesting as cancers and genital warts. College students are at an increased risk for contracting HPV due to higher rates of sexual activity with multiple partners. An effective HPV vaccination series is available and recommended for adolescence; however, HPV vaccination rates in Wyoming are low at 47.7% of females (13-17 years old) with their first HPV vaccination dose and 37.1% of males (13-17 years old) with their first HPV vaccination dose. Moreover, vaccination rates for both females and males decline with the second and third doses: 37.6% and 26.5% for females and 30.8% and 18.8% for males, respectively. Therefore, it can be estimated that freshman entering the University of Wyoming have low HPV vaccination rates due to the low vaccination rates for the state for Wyoming.

Purpose: Research regarding how motivate and educate college students on obtaining the HPV vaccination. Therefore, the purpose of this quality improvement project is to increase HPV vaccination rates of college freshman on the campus of the University of Wyoming.

Methods: The design of this quality improvement project is a two-time educational intervention with measurements over four months. To meet the purpose of this quality improvement project, informational flyers are posted in the Health Science building and in Student Health Services and will remain posted until the cessation of the study. Two emails about the HPV vaccination and where to get the vaccination on campus were sent out to the entire freshman class on November 7, 2016 and February 7, 2017. Additionally, thirty HPV educational handouts were made for the clinicians at Student Health Services to help answer student questions and to provide a more in-depth explanation of HPV and the 9-valent HPV vaccination. Utilizing the electronic medical record, HPV vaccination rates from November 30, 2013; December 31, 2013; January 31, 2014; February 28, 2014; November 30, 2014; December 31, 2014; January 31, 2015; February 28, 2015; November 30, 2015; December 31, 2015; January 31, 2016; and February 29, 2016 were calculated and compared to the dates in which the interventions are in place November 30, 2016; December 31, 2016; January 31, 2017; and February 28, 2017.

Results, Discussion/Implications: Will be shared during the presentation.
Introduction: The demand for primary care services is projected to grow by approximately 14 percent between 2013 and 2025. These demands will build upon an already existing shortage of primary care practitioners. One proposed and practical solution to help mitigate the demand and shortages of primary care services is to utilize nurse practitioners (NPs) to their full potential. This proposition has not been without its challenges. One documented challenge is resistance and reluctance by physicians to accept NPs as primary care providers. Although physicians’ attitudes and perceptions toward NPs have evolved, the resistance by physicians to surrender control over the delivery of healthcare has been an institutional barrier of United States (U.S.) health care since its inception.

Purpose: The aim of this review was to explore and examine the current evidence regarding physician perceptions of NPs from September 2012 to present. The results identify whether physician’s perceptions of NPs have become more favorable to NPs since the conclusion of Schadewaldt, McInnes, Hiller, & Gardner (2013) research.

Methods: A systematic review was completed to summarize articles examining physician perceptions of NPs published between September 2012 to current. Studies that met inclusion criteria were assessed for quality and eligibility by this author. The appraisal tools utilized to assess quality and risk of bias were dependent on the study type.

Results: Three studies met the inclusion criteria. All studies met criteria to be statistically significant. However, several limitations of each study existed.

Discussion: There is a glaring lack of research on physician perceptions of NPs in the primary care setting since the conclusion of Schadewaldt’s et al. (2013) research. The literature used in this review identified several barriers that impacted experiences and perceptions of NPs in collaborative practice. In addition, one facilitator to improving certain aspects of physician and NP collaboration was identified. Overall, this review failed to show that physician perceptions of NPs have become more favorable.

Implications: Will be shared during the presentation.
**Introduction:** Depression is a debilitating condition many Americans experience and when left untreated can result in worsening mental and physical health. Despite the effectiveness of available treatments, many individuals encounter roadblocks when seeking mental health services. This is especially evident for rural Americans who face additional barriers to mental health care when compared to their urban counterparts.

**Purpose:** The purpose of this project was to assist Umatilla Medical Clinic (UMC), a primary care outpatient clinic located in rural Oregon, in a quality improvement (QI) project to improve the process of mental health referrals.

**Methodology:** In February and March of 2017, two separate Plan-Do-Study-Act (PDSA) cycles were conducted. During these cycles, all patients seen at UMC were screened for depression using the Patient Health Questionnaire (PHQ-9). PHQ-9 scores of five or greater were considered a positive screen, indicating risk for a depressive disorder. Individuals with positive screens were given a referral packet and encouraged to follow up with a local mental health provider. Follow-up phone calls were used to identify barriers patients encountered when seeking mental health services in rural Umatilla county and surrounding areas. Individuals given a referral packet were followed up with two to four weeks after referral using a standardized script with prompts.

**Results:** The patients in this project were primarily white, non-Hispanic males between the ages of 36 to 55 years. The first week-long PDSA cycle resulted in 10 patients completing the PHQ-9. Of those completed, one screening resulted in a score of five or greater. This patient refused the referral packet. Consequently, a follow-up phone call was not completed for the first PDSA cycle. The second PDSA cycle resulted in 53 patients completing the PHQ-9. Of those completed, 28 screenings resulted in a score of five or greater. All patients accepted the referral packet. Twenty of the 28 patients were reached via phone call to discuss their referral experience. Of these 20 patients, three completed an adequate follow-up.

**Discussion:** Specificity of PHQ-9 questions, consistent disbursement of referral packets, and the belief that mental health services were not needed were the primary roadblock themes identified using follow-up phone calls. A further look at the motivation of individuals to obtain mental health services should be explored. Full integration of mental health services into the primary care setting should also be considered in an attempt to eradicate identified barriers to mental health care.

**Implications:** Will be shared during the presentations.
Background: The purpose of this pilot quality improvement (QI) project was to increase physical activity (PA) in an underserved population by implementing a PA promotion program at a rural community primary care setting in Wyoming.

Methods: 14 individuals were recruited through the primary care clinic. Participants engaged in three educational and motivational group meetings, took part in motivational interviewing, were monitored and encouraged throughout the program via text, by group leaders. Group exercise activities were encouraged, participants were paired with a volunteer “buddy,” as well as a community “buddy.” Pedometers and PA tracking tools were used to monitor progress. Results: Of the 14 recruited participants, 11 continued through week six of the walking program. A 51% increase in total number of steps was seen across the group when comparing number of steps taken during week one and steps taken during week six. Individually, each participant saw an increase in number of steps. Implementation of the walking program lead to 581,662 more steps in a five-week period then if participants had continued at their baseline step total.

Conclusion: Implementation of a walking group can be an effective way to increase PA in low-socioeconomic individuals in rural communities.

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Conclusion: Implementation of a walking group can be an effective way to increase PA in low-socioeconomic individuals in rural communities.
About the Willow Ceremony

The Willow Ceremony encourages Doctor of Nursing Practice (DNP) students as they continue to prepare for their chosen Family Nurse Practitioner (FNP) or Psychiatric Mental Health Nurse Practitioner (PMHNP) career. Awards also presented at this ceremony include the DNP Program Community Partner of the Year Award, the Excellence in Advanced Practice Nursing Award, and the Peter K. Simpson “Advanced Practice Nursing Fan” Award.
Lifestyle Health-Related Self-Concept in the Context of a Lifestyle Intervention

Kimberly Burbank¹, Taylor Chaulk-Pikula², Megan Griffith³, Hannah McNamee⁴, Kayla Stonier⁴, Tessa Woods⁵, Bhibha Das, PhD⁶, Jenifer Thomas, PhD³

¹Zoology and Physiology Department, University of Wyoming
²Division of Kinesiology and Health, University of Wyoming
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⁴Animal Science Department, University of Wyoming
⁵School of Pharmacy, University of Wyoming
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Past research indicates self-efficacy and supervised exercise are effective interventions for prevention of chronic conditions. Despite well-known health improvements associated with moderate (MPA) and vigorous physical activity (VPA), less than 20% of US adults meet physical activity guidelines. Examination of psychosocial factors provide additional insights into lifestyle intervention participation and, subsequently, desired health outcomes. Health-related self-concept (HRSC) indicates positive (i.e., promote well-being) and negative (i.e., decrease adaptive health behavior) perceptions of health. The purpose of this study was to examine the relationship between Lifestyle-HRSC questionnaire and physical activity.

The Lifestyle-HRSC scale (79-items) was implemented within a 12-week type 2 diabetes prevention intervention. Data were gathered from 71 participants. Linear regressions were calculated to predict physical activity based on Lifestyle-HRSC items.

From the pre-intervention results, items associated with the nutrition, social support, avoiding diabetes, physical activity, and challenges related to being healthy factors of the Lifestyle-HRSC predicted increased MPA and VPA. The post-intervention results indicated that items association with the nutrition, social support, avoiding diabetes, physical activity, challenges related to being healthy, and problem solving factors predicted increased MPA and VPA. For pre- and post-intervention, more Lifestyle-HRSC items were associated with prediction of vigorous physical activity. In addition, similar factors were associated with both moderate and vigorous physical activity but the individual items that predicted both were different. Finally, problem solving items were only associated with post-intervention MPA and VPA.

Physical activity effectively prevents chronic conditions, including heart disease and type 2 diabetes. Psychosocial factors could enhance our understanding of adherence to physical activity guidelines. Physical activity, diet, social support, and behavior change techniques have been proven to contribute to greater success in interventions. To ensure successful participation and adherence to physical activity, it is important for providers to understand these factors. Lifestyle-HRSC may provide an innovative screening to distinguish among participation in moderate and vigorous physical activity.