THE UNIVERSITY OF VERMONT
COLLEGE OF NURSING AND HEALTH SCIENCES

ZEIGLER RESEARCH FORUM

Wednesday, May 9, 2018
8:00 a.m. to 12:15 p.m.
Dudley H. Davis Center
University of Vermont
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FORUM SCHEDULE
Dudley H. Davis Center, Fourth Floor, Silver Maple Ballroom

8 a.m. Refreshments
8:25 a.m. Dean’s Welcome
8:35 a.m. Introduction
8:45 a.m. Keynote
9:45 a.m. Break
10 a.m. Poster Session
11:15 a.m. Oral Presentation 1
11:45 a.m. Oral Presentation 2
KEYNOTE SPEAKER

Margaret Grey, DrPH, RN, FAAN

Margaret Grey is the Annie Goodrich Professor and former dean at the Yale School of Nursing and holds an appointment as Professor of Pediatrics in the Yale Medical School. She holds a BSN from the University of Pittsburgh, an MSN in pediatric nursing from Yale University, and a Doctorate in Public Health and social psychology from Columbia University. A pediatric nurse practitioner, Dr. Grey’s research has focused on the behavioral aspects of diabetes in children, and the study of interventions that improve both metabolic control of diabetes and the quality of life in young people and their parents. Preventing type 2 diabetes in high-risk youth and lifestyle management of youth with type 2 diabetes are also an interest. She has been principal investigator for grants totaling over $45 million and is the author of 350 journal articles, chapters, and abstracts and has received numerous honors for her research, including election to the National Academy of Medicine in 2005.
## RESEARCH INCENTIVE GRANT
### ORAL PRESENTATIONS
#### 11:15 A.M. to 12:15 P.M.
Dudley H. Davis Center, Fourth Floor, Silver Maple Ballroom

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<td>11:15 to 11:45 A.M.</td>
<td>Shelley Velleman, PhD, CCC-SLP</td>
<td>&quot;Translational Research: Assigning Motor Speech Disorders in Children&quot;</td>
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<td>11:45 A.M. to 12:15 P.M.</td>
<td>Reuben Escorpizo, PT, MSc, DPT</td>
<td>&quot;WORQ as a tool to measure work functioning - does WORQ work?&quot;</td>
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## PRESENTERS/POSTERS
### COMMUNICATION SCIENCES AND DISORDERS

**Poster 1**  
Joseph, A., Patch, A., and Mortner, E.  
"Examining the Effects of AAC Intervention on Verbal Language in Children with Autism Spectrum Disorders: A Systematic Review"  
This systematic review researched the efficacy of Augmentative and Alternative Communication (AAC) in increasing verbal communication in children with Autism Spectrum Disorder (ASD). It may be used to inform best practice when working with children with ASD.

**Poster 2**  
O’Rourke, E., and Coderre, E.L.  
"Implicit Semantic Processing of Linguistic and Non-Linguistic Stimuli in Adults with Autism Spectrum Disorder"  
Individuals with autism spectrum disorder (ASD) commonly experience language deficits, particularly in higher-level functions like reading comprehension. Impairments in semantic integration, or the ability to understand the relationships between the meanings of words or other stimuli, may underlie many of these language difficulties.

**Poster 3**  
Bailey, M., Burningham, L., Fifield, E.  
"The Efficacy of Telepractice on Expressive Language Outcomes for Adults with Aphasia: A Systematic Review"
Access to skilled speech and language intervention can be difficult for individuals residing in rural areas as well as for individuals with complex health and mobility issues. Telehealth (which includes therapy and rehabilitation) can provide effective services in the context of one’s home, allowing clinicians to reach a wider population of individuals. The objective of this systematic review was to determine whether telepractice service delivery produces positive expressive language outcomes that are comparative to direct service delivery for adults with aphasia.

Poster 4
Johnson, A., Mahoney, B., McCarthy, M., and White, C.

This systematic review aims to examine the effectiveness of the Picture Exchange Communication System (PECS) when compared to other forms of Augmentative and Alternative Communication (AAC) in supporting children with Autism Spectrum Disorder (ASD) in development of their social communication skills.

Poster 5
Esselstyn, F., Hall, E., and Winkel, A.
The aim of this study is to determine if joint attention interventions have an effect on general play skills in individuals with Autism Spectrum Disorder (ASD) aged birth to five years.

BIOMEDICAL AND HEALTH SCIENCES
Poster 6
Mui, J., and Deming, P.
“A systematic review of entecavir used as a monotherapy in chronic hepatitis B patients with advanced liver disease”
An estimated 2 billion people are affected by the hepatitis B virus (HBV), with 360 million currently suffering chronically and 500,000-700,000 deaths each year. Most primary HBV infections in adults are self-limited, however, a small percentage of individuals will experience a lifetime of chronic hepatitis B (CHB) infection. Thereby, the treatment goals for these patients are focused on achieving a sustained suppression of viral replication, a reduction or prevention of liver disease progression, and improvement in their overall survival rate. Out of the seven therapeutics available, World Health Organization guidelines indicate Entecavir (ETV) as a first-line antiviral therapy in adults, adolescents, and children 12 years or older. ETV has a high barrier to drug resistance. Thus, a better understanding of ETV’s efficacy, particularly in CHB patients with advanced liver disease, will provide important information on disease progression. In this systematic review, we aim to determine the evidence that indicates the use of ETV as an effective monotherapy in CHB- individuals with fibrosis or cirrhosis.

Poster 7
Lanoue, Ch., Deming, P., and Bryan, L.
“Phone Calls of Laboratory Customer Service: A Quality Improvement Investigation”
The art of high quality Customer Service in the medical field has proven to improve patient satisfaction through establishing excellent communication between health care providers and their clients. The University of Vermont Medical Center utilizes its own laboratory customer service to maximize efficiency in providing excellent quality of care to the patients and satisfying clients alike. To deliver a high quality of service, adequate staffing must be in place to match the volume of incoming work. The objective of this study was to evaluate and assess the quality within the Customer Service department by examining the staffing level in comparison with the incoming volume of calls.
Poster 8
Trahan, R., Deming, P., and Carney, N.
“Improving Quality for Patients with Hirschsprung’s Disease”
Making a definitive diagnosis of Hirschsprung’s Disease is of the utmost importance, as treatments for this condition and similar conditions vary greatly. Hirschsprung’s Disease is a developmental disorder that is often found in young children, especially infants. This condition is characterized by an absence of peristalsis in the gastrointestinal tract that prevents the body from expelling feces. As a result, constipation and bowel obstructions that can lead to colonic distension and enterocolitis are common and often require a complex colonic resection. Similar conditions such as mild constipation, mild bowel obstructions and variant Hirschsprung’s, on the other hand, are often treated using minimally invasive techniques such as a barium enema. Following a trend of incorrect fee codes being assigned to samples taken for suspected Hirschsprung’s Disease, a team was organized to investigate variables that may be leading to the increase of errors.

Poster 9
McGowan, M., and Deming, P.
“On-Site Oral Fluid Detection of Cannabis: A Systematic Review”
Marijuana, or cannabis, is one of the world’s most prevalent drugs with over 200 million users. Intake of marijuana has a wide range of potential both mental and physical effects, however Δ9 - tetrahydrocannabinol (THC) is the most potent psychoactive constituent. Potential short term effects include euphoria, increased appetite, and impaired psychomotor function. Due to the intoxication that can occur after recent intake, testing needs to occur to prevent being under the influence in a public or work setting. Oral fluid (OF) is a suitable testing matrix, as it is a noninvasive testing matrix, which can also occur on-site. Due to the need of testing, numerous testing platforms are available, however there is no definitive testing device to recommend. This paper describes the methods of a systematic review to identify on-site point of care instruments used to analyze oral fluid for the presence and quantity of THC. The main purpose is to identify and recommend the most suitable testing platform for on-site testing for recent intake of cannabis or THC.

NURSING
Poster 10
Choudhury, S.R.
“Implementation of a Deconditioning Prevention Program: Getting Dressed Makes a Difference”
Deconditioning by immobility or bed rest affects essential body systems and diminishes functional capacity. Individuals age 65 and older have more hospital stays than any other age group costing healthcare over $330 Billion annually. Studies show this group struggle to regain normal activity levels. Empowering patients to dress and wear their own clothes can prevent deconditioning.

Poster 11
Nurkanovic, M.
“The implementation of telehealth in disease management at patient-centered medical home”
Telehealth (TH) and video conferencing in the patient-centered medical home (PCMH) can bridge geographical gaps between patients and providers, by eliminating the inconveniences of leaving the house and traveling to appointments. The evidence indicates that TH also: provides clinical benefits in high-risk patients, improves glucose control, improves quality of life and reduces ED visits and hospitalizations for patients with COPD3, enables self-care of patients with heart failure, reduces risk of admission for patients with asthma, improves medication adherence, results in potential cost savings7, and provides an opportunity to observe patients in a home environment. The specific aims of this project were the implementation of TH protocol and pilot testing at a nurse practitioner-run PCMH.
Poster 12

“Perspectives of People Living with HIV toward Health Care Providers: Insights into Health Literacy Strategies”
To further our understanding about relationship influences that impact health literacy, the purpose of this study was to characterize the perspectives of a culturally diverse group of people living with HIV (PLWH) toward their health care providers. Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate decisions related to their health. Low health literacy is associated with poor health outcomes. Use of preventive services, knowledge about medical treatment, rates of hospitalization, health status, and health care costs are all linked to health literacy. For PLWH, lower health literacy is associated with lower CD4 cell counts, higher viral loads, and a decreased likelihood of taking antiretroviral medication. In order to achieve and maintain HIV viral suppression, adherence to HIV treatment regimens requires a constant, near-perfect medication adherence rate for many drugs. The ability to seek and sustain treatment is contingent on one’s ability to navigate a complex health care system. Proficiency in health literacy skills is critical to this process.

Poster 13
Ingpen, E.

“Responding to Adverse Childhood Experiences in the Primary Care Setting”
The impact of Adverse Childhood Experiences (ACEs) on lifelong health outcomes is well documented. The effects of ACEs can be mitigated using therapeutic and mindfulness strategies which build resilience. Many health care providers are reluctant to screen patients for ACEs, citing barriers such as time, lack of familiarity, concern for patient emotional stability, and lack of knowledge about resources for patients with high scores. This project was designed to address these barriers, develop a resource list for resiliency strategies, and create a sustainable screening model.

Poster 14
Turley, A.K.

“ADHD Medication Protocols in the College Setting: A Standardized Student Provider Agreement”
Stimulant medication use and abuse is growing throughout the country, especially on college campuses. Diversion, through selling or giving of stimulant medication among college students is a common practice. Over half of college students currently taking a stimulant for Attention Deficit Hyperactive Disorder (ADHD) report diverting medication to a peer at least once. Reasons for misuse of stimulants include increased academic performance, increased attention, weight loss, and increased motivation. A standardized student provider agreement was needed for the student population at a small private college health center given a lack of clear expectations for the use of stimulants for ADHD treatment therapy. The nurse practitioners (NPs) of this college health center identified the need for a new agreement, and also identified the need for an educational session for providers to discuss current diversion statistics and best practice for reducing diversion of stimulant medications.

Poster 15
Carlet, M.

“Complementary and Alternative Therapies Education for High-Risk Women”
Women with substance use disorder (SUD) are considered high-risk and face many barriers accessing health care. One common barrier is distrust of the traditional medical model. Complementary and alternative medicine (CAM) provides these women an opportunity to build self-care skills and resiliency. This project was designed to address the complex healthcare needs of mothers with SUD by adding CAM modules to a current self-care skills curriculum.
Poster 16
Burzynski, A.

“Emergency Crisis Services for Psychiatric Boarder Patients at Central Vermont Hospital ED”

This project’s aim was to reduce the length of ED stays for psychiatric boarder patients at Central Vermont Medical Center (CVMC) ED, and prevent unnecessary psychiatric inpatient admissions through access to psychiatric crisis stabilization care.

Poster 17
Ward, C., Jarvis, N., Cawley, E., and Lewis, L. F.

“The Experience of Being an Adult with Autism Spectrum Disorder Who Expresses a Sexual Minority Orientation”

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that is characterized by “restricted, repetitive patterns of behavior, interests, or activities” and “persistent deficits in social communication and social interaction” (American Psychiatric Association, 2013). Previous studies show a high incidence of individuals with ASD who identified as sexual minorities, such as gay, bisexual, asexual, pansexual, etc. We found there is a gap in the literature about individuals with ASD who identify as sexual minority identities and their experiences. The purpose of this study is to explore the experiences of adults with ASD who identify as sexual minority orientations (SMO).

Poster 18
Charron, H.J.

“Disseminating Supplemental Screening Resources for Providers Counseling Women with Dense Breasts”

With the new Vermont breast density notification law in 2017, mammographic density has greater implications for patient management. Currently, there are no consensus guidelines available to guide patient and provider decisions regarding supplemental breast cancer screening for women with dense breasts. Patients should be counseled regarding the potential for false positive findings and the need for additional invasive procedures when pursuing additional screening modalities. Providers benefit from understanding the implications of dense breasts when providing appropriate counseling. The purpose of this project was to 1) educate providers about important considerations when counseling individual patients with dense breasts, and 2) create an easy to understand breast density resource for providers.

Poster 19
Hinojosa, C.

“Assessing Need for Primary Care Services at a Needle Exchange Program”

Current estimates suggest that more than 15 million people worldwide regularly inject drugs and are at higher risk for injuries, disease, and death. Their mortality rate is 15 times higher than the general population, and despite their increased healthcare needs, their poor access and utilization of mainstream primary healthcare services is well documented. Providing primary care services within a harm reduction program, holds the potential to increase healthcare access and retention in individuals who inject drugs. Anecdotal evidence exists that primary care services are desirable by both clients and staff at Safe Recovery Needle Exchange Program, but no formal assessment has been done. This study was designed to determine the feasibility of integrating primary care services into Safe Recovery Needle Exchange Program by performing a needs assessment of 1) Clients’ perceptions of need for onsite primary care services, and 2) Administrator/staff’s perceptions of need for onsite primary care services.

Poster 20
Bent, R.

“Simulation-Based Training to Increase Nursing Satisfaction, Timeliness, and Skills Acquisition”
Simulation based education for inpatient nurses is considered an effective teaching strategy and has been shown to increase nurse satisfaction, skills acquisition and positive patient outcomes. Nurses are highly satisfied with skills acquisition when performed in a simulation center and demonstrate improved skills performance. Simulation environments provide an ideal place for skills competency sign off as it is a place where mistakes can be made and learned from with no risk of harm to patients. A New England based 350 bed academic medical center (AMC) has consistently scored poorly on National Database of Nursing Quality Indicators surveys for nursing satisfaction and nursing education. Historically 10% of nurses on an 26 bed med/surge unit do not pass all their competencies the first attempt. As a result, the AMC nursing leadership decided to update the skills competencies process. The AMC provided space in the SIM center for a 24-hour skills day to be tested, with a goal of unit wide skills sign off, increased nurse satisfaction, increased pass rate on three skills. The skills being signed off are catheter insertion, central line dressing change and blood administration.

**Poster 21**
Brereton, A.
“Video visits for home health patients with Chronic Obstructive Pulmonary Disease”
Patients with Chronic Obstructive Pulmonary Disease (COPD) tend to face frequent emergency department visits and hospitalizations. The purpose of this project was to assist a home health agency in the process of building a video visit program to provide additional support to their COPD patient population.

**Poster 22**
Fredette, N.
“Improving Palliative Care Management in the Nursing Home Setting: An Interprofessional Approach”
Approximately 1.4 million adults reside in certified nursing facilities throughout the U.S. while nearly 25% of older adults die within this setting. As the quality of life of nursing home residents often decreases in their last year of life, an effort to improve palliative care services within this setting appears warranted. Recommendations by the American Nurses Association advocate for the use of the National Consensus Project for Quality Palliative Care’s Clinical Practice Guidelines for Quality Palliative Care (2013) in the development and implementation of palliative care services. The purpose of this project was to develop a palliative care program based on these guidelines to be utilized within the nursing home setting.

**Poster 23**
Stevens, K. and Lewis, L.
“Exploring the lived experience of meltdowns and shutdowns in adults with Autism Spectrum Disorder”
This study explores the experience of having a meltdown, shutdown, or both in adults with Autism Spectrum Disorder (ASD). Some individuals faced with prolonged stress and excessive sensory stressors report shutdowns/meltdowns. Meltdowns are uncontrolled reactions to stress. Shutdowns can be similar but one may become catatonic, expressionless or unresponsive. Overall, individuals with autism tend to experience higher levels of stress and anxiety. Research focuses on meltdowns/shutdowns in children with ASD but there has been limited research on adults’ experience.

**Poster 24**
Jarvis, L., and Lewis, L.
“A Content Analysis of the Experiences of Undergraduate Nursing Students Working with Opioid Dependent Patients in the Clinical Setting”
Upon entering the third year of BSN nursing curriculum many students are exposed to working with patients in the clinical setting for the first time in their undergraduate education. While each unit has a primary focus, opioid addiction is a prevalent public health issue that presents itself on every unit. There is currently a deficit in research that specifically explores the experiences of nursing students caring for those struggling with opioid dependence. The purpose of this study was to explore undergraduate nursing students’ experiences during encounters with patients struggling with opioid use disorder.

REHABILITATION AND MOVEMENT SCIENCE

Poster 25
Westervelt, K., Kunker, K., Patel, R., Smith, E., Woltitzer, K.
“Online Clinical Mentoring for Physical Therapists Experiencing Professional Isolation: A Pilot Study”
Clinical mentoring is essential for the professional development of physical therapists (PTs) and has been demonstrated to improve confidence and clinical decision-making. PTs working in professionally isolated settings face a unique set of challenges which can result in diminished job satisfaction, recruitment, and retention. These clinicians often have difficulty accessing clinical mentors. The innovative use of technology, including video-conferencing, can help address the challenges facing these healthcare providers by eliminating barriers associated with professional isolation and improving access to clinical mentoring. The purpose of this study was to examine the effects of online clinical mentoring on PTs who experience professional isolation in an outpatient musculoskeletal setting.

Poster 26
Novelli, A.
“The Effect of Participation in Collegiate Sports on Adherence to Exercise as an Adult”
Objective: To examine the relationship between collegiate sport participation and adult habitual physical activity (PA).

Poster 27
Westervelt, K., Kunker, K., Little, C., Ushakova, K., Varin, K., and Netcoh, S.
“An Innovative Strategy to Improve Classroom Engagement in a University Anatomical Science Class”
Instructional methods which enhance engagement and appeal to multiple learning styles have shown significant benefits in retention and understanding. Both are critical for students studying anatomical sciences. Including embodied learning as part of Universal Design for Learning (UDL) promotes a learning environment that accommodates learning differences. Little research has investigated embodied learning in higher education, therefore this study examined whether an embodied instructional style changed students’ engagement and learning of applied kinesiology.

Poster 28
Warshaw, A., Howard, A., Peterson, D., and Henry, S.M.
“Movement Competency Screen Predicts Performance in Female Military Academy Recruits”
Musculoskeletal injuries in military populations are a major contributor to reduced physical readiness. Utilizing a screening tool that predicts physical performance and injuries upon entering the military could help to identify recruits who need remedial training. The Movement Competency Screen (MCS) was created to identify poor movement patterns and suggest safe load levels for an individual. This study sought to establish the predictive ability of the MCS for injuries and performance in a group of recruits from the United States Naval Academy (USNA) over four years.
Poster 29
Warshaw, A., Holm, A., McCuin, T., and Henry, S.M.
“Impacts of Psychologically Informed Practice Training Can Be Maintained One Year Later”
Using the Pain Attitudes and Beliefs Scale for Physical Therapists (PABS-PT), UVMMC physical therapists’ (PTs) attitudes and beliefs about chronic pain before and after a 5-day course about psychologically informed practice (PIP) were quantified. We aimed to determine if the PTs’ improved attitudes and beliefs displayed immediately after the 5-day training were maintained after meeting with a clinical psychologist once a month for one year post-training.

Poster 30
Gurney, P., Harte, H., Liebman, L., Register, E.C., Zeppetelli, K., Bianchi, N., Escorpizo, R., Orest, M., Smith, P.
“There is Inconclusive Evidence Between Yoga and Usual Care in the Treatment of Chronic Low Back Pain: A Systematic Literature Review”
Yoga has been suggested as a treatment method for chronic low back pain. Currently there is a lack of evidence examining the ideal dosing (frequency, intensity, and duration) of yoga in low back pain. This review aims to identify the ideal dosing of yoga interventions when compared to usual care (verbal and/or written advice, or no additional intervention) to improve function and reduce pain for individuals with chronic low back pain.

Poster 31
“Suicidality, Physical Activity, and Sport Participation in US Middle and High School Students”
Exercise is inversely related to both sadness and suicidality in developing adolescents. To date, the literature has addressed neither the contextual factors or the dynamic fluctuations of these relationships in middle and high school children over time. The purpose of this study is to examine the temporal changes in the relationship between physical activity, sport participation, sadness, and suicidality in students in grades 6-12 in the U.S.

Poster 32
James, A., Lippitt, J., Sherwin, C., Williams, S., and Peters, D.
“The relationship of structural connectivity to coordination task performance in chronic stroke”
Stroke is a leading cause of long-term disability. Previous research associates motor outcomes with lesion size and/or location. Advances in neuroimaging have allowed examinations into relationships between cortical connectivity and motor function after stroke; however, little is known about structural connectivity damage and fine motor deficits post-stroke. The purpose of this study was to examine the relationship between structural connectivity within key brain motor areas and upper/lower extremity (UE/LE) coordination in chronic stroke. Specifically, we examined motor network structural connectivity relative to different coordination tasks and compared to general motor weakness.

Poster 33
Ahern, K., Hinsdale, K., Triquet, T., and Kasser, S.
“Cognitive-Motor Interference while Standing and Walking in Individuals with and without Multiple Sclerosis”
Individuals with multiple sclerosis (MS) experience both cognitive and movement deficits that negatively impact activities of daily living and mobility. Given that a majority of tasks require simultaneously thinking and moving (i.e., dual-tasking), these disease-related impairments significantly increase fall risk. The purpose of this project was to examine cognitive-motor interference in upright stance and walking in people with and without MS.
Poster 34
Carbonar, A., Dunning, M., Greenebaum, J., Mahoney, S., Mohapatra, S.
“Rapid Screening tools for asymptomatic mild traumatic brain injury”
Mild traumatic brain injuries (mTBI), also known as concussions, account for 82.3% of TBIs in the US. Early identification of concussions leads to early intervention, which has shown to reduce post-concussive symptoms. The purpose of this study is to identify sensitive measures of existing diagnostic tools in order to guide the development of a more comprehensive and reliable assessment. Accurate identification of concussion is necessitated, as there is no current “gold standard” diagnostic tool.

Poster 35
“Vestibular Rehabilitation Therapy and Sub-Symptom Exercise to Improve Balance for Patients with Persistent Concussion Symptom”
Mild traumatic brain injuries, commonly referred to as concussions, affect people of all ages. Following concussion, one may experience symptoms of vestibular dysfunction that impact postural balance, interfering with one’s quality of life and daily routine. Duration of symptoms vary person-to-person and may persist for months or longer. Healthcare providers may choose to treat these symptoms with sub-symptomatic exercise (SSE) or with vestibular rehabilitation therapy (VT). There is a lack of evidence comparing these approaches. This review investigates whether SSE or VT has a greater positive impact on postural balance in patients with persistent concussion symptoms.

Poster 36
Heffernan, Ch., Kowalczyk, N., O’Connor, C., Power, D., Bianchi, N., Escorpizo, R., and Failla, M.
“A Systematic Review and Meta-analysis: Can Fatty Infiltration of the Rotator Cuff be Halted or Reversed?”
Rotator cuff pathology is a prevalent health issue that manifests with a variety of symptoms in the shoulder including: pain, muscle weakness, and difficulty performing daily tasks. Degenerative rotator cuff tears are commonly further complicated by the presence of intramuscular fat. This fatty infiltration (FI) is predictive of poor outcomes after surgical repair of the rotator cuff. It remains controversial whether surgical repair alters the progression of fatty infiltration. The purpose of this study is to determine if surgical repair and subsequent rehabilitation halt the progression of fatty infiltration of the rotator cuff.

Poster 37
Doe, K.S., Gerry, M.L., Karlsson L.H., Moore B.E., Wingood M., and Gell, N.
“Steady ON: One- and Five-Month Outcomes after Community-Based Fall Risk Screening”
Falls among older adults ≥ 60 years are prevalent and lead to increased physical, social, and medical costs. Research to better characterize response and adherence to fall risk screening efforts is needed. This study characterizes risk-reducing actions after community-based fall risk screenings.

Poster 38
“Pain Neuroscience Education: Does Dosage Matter? A Systematic Literature Review”
Chronic low back pain (CLBP) is a condition that affects millions of people each year and costs the U.S. healthcare system billions of dollars annually. Pain neuroscience education (PNE) is an educational intervention that has been shown to be effective in decreasing pain and increasing function for people with CLBP. Although the effectiveness of PNE is supported, research exploring the most successful delivery dosage of it is scarce. This study’s objective was to perform a systematic literature review examining dosage and implementation strategies of PNE on pain and functional outcome measures for patients with CLBP.
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Department of Biomedical and Health Sciences

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Department of Nursing


Nurkanovic, M. “The implementation of telehealth in disease management at patient-centered medical home”. (11)


Ingpen, E. “Responding to Adverse Childhood Experiences in the Primary Care Setting”. (13)

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Carlet, M. “Complementary and Alternative Therapies Education for High-Risk Women”. (15)

Burzynski, A. “Emergency Crisis Services for Psychiatric Boarder Patients at Central Vermont Hospital ED”. (16)

Charron, H.J. “Disseminating Supplemental Screening Resources for Providers Counseling Women with Dense Breasts”. (18)

Hinojosa, C. “Assessing Need for Primary Care Services at a Needle Exchange Program”. (19)

Bent, R. “Simulation-Based Training to Increase Nursing Satisfaction, Timeliness, and Skills Acquisition”. (20)

Brereton, A. “Video visits for home health patients with Chronic Obstructive Pulmonary Disease”. (21)

Fredette, N. “Improving Palliative Care Management in the Nursing Home Setting: An Interprofessional Approach”. (22)

Stevens, K. and Lewis, L. “Exploring the lived experience of meltdowns and shutdowns in adults with Autism Spectrum Disorder”. (23)

Jarvis, L. and Lewis, L. “A Content Analysis of the Experiences of Undergraduate Nursing Students Working with Opioid Dependent Patients in the Clinical Setting”. (24)

Department of Rehabilitation and Movement Science


Novelli, A. “The Effect of Participation in Collegiate Sports on Adherence to Exercise as an Adult”. (26)


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Heffernan, Ch., Kowalczyk, N., O’Connor, C., Power, D., Bianchi, N., Escorpizo, R., and Failla, M. “A Systematic Review and Meta-analysis: Can Fatty Infiltration of the Rotator Cuff be Halted or Reversed?”. (36)

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