

GRAND VALLEY STATE UNIVERSITY

2016 Annual Health Report

Transforming Health Care



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Cook-DeVos Center for Health Sciences



LETTER FROM THE VICE PROVOST OF HEALTH

I am pleased to share Grand Valley State University's 2016 *Annual Health Report* with you. This publication serves to showcase how Grand Valley's innovations in teaching, scholarly research, leadership, and collaborative community partnerships are continuing to transform health care in our communities.

Grand Valley remains the leading provider of health professionals in West Michigan. This year, Grand Valley's total student body peaked at over 25,000 students. More than 9,000 of those students were enrolled in one of the university's 75 health or health-related academic programs. These programs are strategically housed throughout the university's various academic units. However, a hallmark of each program is an intentional commitment to the preparation of effective practitioners and innovative leaders who possess the knowledge, skills, and commitment to enact meaningful contribution to their professions and the communities in which they serve.

In addition to meeting the professional needs of the health care industry, Grand Valley upholds the conviction that education and clinical training exist in, and must respond to, the ever changing environment in which health care is delivered and accessed. As such, Grand Valley is pleased to announce the opening of its accredited graduate level clinical dietetics program where students will complete rigorous training in a variety of expertise areas and interprofessional practice settings enabling them to meet national registration examination requirements. This caliber of education and clinical training will ensure patients in need of dietetic services are provided the highest level of expertise and care.

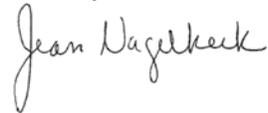
As a university we continue to advance key strategic initiatives including the expansion of our allied health sciences academic programs. This year, Grand Valley has expanded its Bachelor of Allied Health Sciences and Master of Public Health to the university's regional center in Northern Michigan's Traverse City.

As our health science programs continue to grow, so does Grand Valley's commitment to meeting the needs of our community, including addressing the demands from regional employers and potential students seeking health sciences degrees. To that end, we are expanding our health campus. Current projections include at least two additional buildings. The first of these will be just north of the current Cook DeVos Center for Health Sciences, along Lafayette Avenue. The governor and state legislature have authorized Grand Valley to also begin planning for facility expansion on Michigan Street adjacent to the Cook DeVos Center. The additional space and related resources will allow us to advance Grand Valley's commitment to our community and our students. We will keep you informed as these exciting projects develop.

In conclusion, Grand Valley appreciates and values its relationships with its affiliated community partners. The opportunities for students to experience exceptional, real-world, patient care environments help shape the disciplinary knowledge and skills that are essential for their future career success.

Collectively we educate, engage, and inspire today's students to use their talents as future professionals to transform health care.

Sincerely,



Jean Nagelkerk, Ph.D., F.N.P., F.N.A.P.
Vice Provost for Health
Grand Valley State University





REPORTS ON SELECTED HEALTH-RELATED PROGRAMS AT GRAND VALLEY STATE UNIVERSITY

Grand Valley State University is the major provider of health care professionals in the West Michigan area and the region's primary talent pipeline for such positions in the future. As we educate the next generation of professionals, we will continue to offer the most cutting-edge programs and advanced learning opportunities. Last year, nearly a third of Grand Valley's student body enrolled in courses in health-related programs, which make up the most comprehensive array of programs available in Michigan. This section highlights just a few of those programs.



Master of Science in Clinical Dietetics

The first cohort of the clinical dietetics program will enroll in Fall 2016. The new program will focus on preparing students to provide nutrition therapy and consultations to patients.

Clinical dietitians work in acute care and develop food-based interventions for patients with various diseases. The Master's of Science in clinical dietetics has two tracks. The first track includes didactic classes, along with the 1,200 hours of supervised practice required to sit for the national registration examination for registered dietitian/nutritionists (R.D.N.). The second track is for dietitians who are already R.D.N.s. Since this group already

is credentialed, no supervised practice is required for this group.

According to Jody Vogelzang, R.D.N., FA.N.D., clinical dietetics program director, "Now, more than ever, R.D.N.s need to utilize high-level thinking skills to not only collect information but to analyze, evaluate, and synthesize data to create individualized interventions based on biochemical, physical, and genetic information. A graduate degree is essential as we move dietetics forward to better align practice with our professional vision."

For more information, please visit the program website at www.gvsu.edu/grad/clinicaldiet/ or contact Jody Vogelzang at vogelzjo@gvsu.edu.

Master of Public Health Program Meets Northern Michigan Need

The growing need for public health practitioners in northern Michigan inspired the expansion of the Master of Public Health (M.P.H.) for Fall 2016. The first cohort of students will enter the program with a focus on health promotion at Grand Valley State University's Traverse City Regional Center. The program will address how to identify specific needs of a community and create ways to elevate its health status and reduce disparities.

Heather Wallace, program coordinator in Traverse City, said the program is the first of its kind available to people living and working in northern Michigan. "Graduates will gain a toolbox of knowledge and skills that are in high demand right now," Wallace said. "They will learn valuable skills like how to incorporate new wellness policies in a company and how to evaluate use of resources in a way that promotes efficiency and effectiveness. I see our graduates going to

work for many types of workplaces, including governmental agencies and private companies."

Classes will be held in the late afternoon and evening, catering to working professionals, and are offered both online and in the classroom. Students will focus on health promotion and may choose electives in policy, environmental health, and health disparities. Upon completion of the five-semester, 51-credit MPH program, graduates will be qualified to earn the Certified Health Education Specialist (CHES) credential.

Theresa Bacon-Baguley, associate dean for research in the College of Health Professions, said the decision to expand the program to Traverse City is based on the need for professionals to fill critical, health-related positions and for more educational health programs in northern Michigan.

For more information on the Master of Public Health and other programs offered at the Traverse City Regional Center, visit www.gvsu.edu/traverse/.



Grand Valley's Traverse City Regional Center is located on the campus of Northwestern Michigan University.

GVSU Allied Health Sciences Program Expands to Traverse City

Grand Valley State University has expanded its Bachelor of Allied Health Sciences programs to the university's regional center in Traverse City.

The bachelor's degree in allied health sciences (AHS) is ideal for aspiring health care professionals in northern Michigan. The AHS program is designed to prepare students for careers in the health care industry or for graduate studies in health-related fields. The AHS program can be tailored to meet the requirements for application to the graduate, health-related programs offered by Grand Valley in Traverse City, such as social work, physician assistant studies, public health, and the hybrid occupational therapy program.

Michael Wambach, assistant professor and chair of AHS, said the program was designed to complement Grand Valley's Master of Physician Assistant Studies degree, also offered in Traverse City. "This will allow students interested in physician assistant studies to participate in both our undergraduate and graduate curriculum in a more seamless manner," said Wambach.

For adult students who need flexibility, online and hybrid formats are available, and classes are held in the evening. Scholarships and financial aid are available.

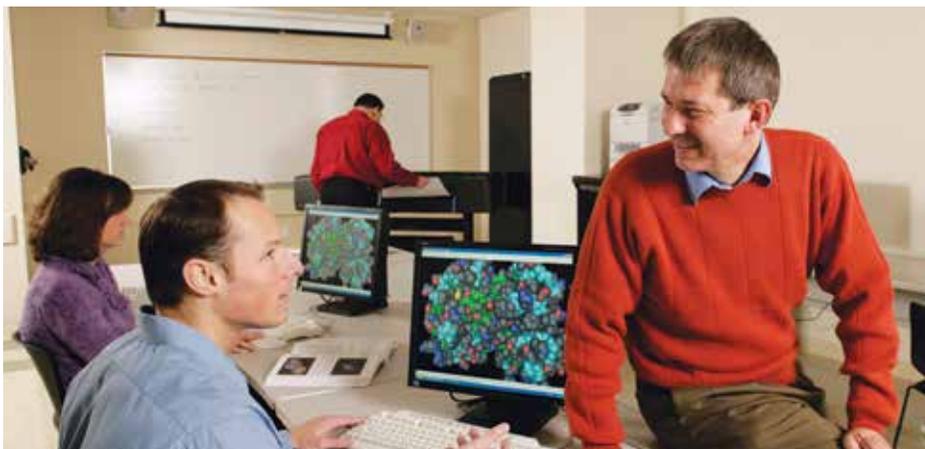
Students applying for the AHS health professional degree completion emphasis will be allowed to transfer up to 80 credits from community college courses in sciences and general education that currently transfer to Grand Valley. Students must take at least 40 credits from Grand Valley, including all general education foundation, upper division "Issues" courses, and the AHS core set of courses (19 credits). Roy Olsson, dean of the College of Health Professions, said expansion of the program is part of an ongoing effort to place more graduates in jobs in northern Michigan and the Upper Peninsula.

For more information about the allied health program, visit www.gvsu.edu/tchealth/.

For more information on programs offered at the Traverse City Regional Center, visit www.gvsu.edu/traverse/.

Medical and Bioinformatics Professional Science Master's Program

The medical and bioinformatics (MBI) program is one of Grand Valley's three professional science master's (PSM) programs and part of an exciting field that brings together shared areas of biology, medical sciences, statistics, and computer sciences and meets a growing demand for informaticians and health care analysts.



Professor Gunther Tusch works with students in the bioinformatics lab.

The medical and bioinformatics program has two primary emphases — medical informatics and bioinformatics. Medical informatics applies technology to health care through the accumulation, organization, and analysis of data. Students in this emphasis use their training in computing, analytics, and databases to work with clinical data (e.g., from electronic medical records). They then use this information to help nurses, doctors, and other health care professionals with problem solving and decision making to improve health.

Bioinformatics is the application of computer technology to biological data such as gene sequences, protein expression patterns, and concentrations of metabolites. Students in this emphasis often work in academic or pharmaceutical labs, where they analyze large data sets gathered via genomic or proteomic experiments. Their efforts are often focused on finding the causes of, or cures to, diseases such as cancer, diabetes, and heart disease.

Students in the MBI program take coursework that provides a strong foundation in computer programming, analytics, database design, and information visualization. They are required to spend at least 440 hours in an internship where they apply their technical skills to real-world problems, while also developing the professional skills necessary to be successful in work environments.

According to Guenter Tusch, Ph.D., chair of the MBI program, “Graduates of the MBI program are trained for leadership roles in health care and research institutions and pharmacological and biotechnology industries, as well as other sectors of the life sciences.”

Questions about the medical and bioinformatics program can be directed to Guenter Tusch, Ph.D., chair of the MBI program, at tuschg@gvsu.edu or Tim Born, Ph.D., director of the PSM program, at bornti@gvsu.edu.

Diagnostic Imaging

The medical field of diagnostic medical sonography (DMS), commonly known as ultrasound, employs health professionals called sonographers who utilize imaging technology to assist in the process of medical diagnosis. Contrary to common understanding, sonographers don't exclusively work with pregnant patients, but have skills that are utilized by many specialties, including emergency medicine, pediatrics, fertility, oncology, musculoskeletal, and general medicine. Sonographers serve as integral members of interprofessional teams.

DMS professionals operate ultrasound machines that use high frequency sound waves and Doppler instrumentation to create cross-sectional images of human tissue, as well as quantitative profiles of human circulation using techniques that are noninvasive and do not use radiation. The diagnostic images allow physicians to visualize differences between healthy and pathologic tissues, as well as to evaluate the quality of blood flow within the human body. Because the foundation of DMS is technology, the field is dynamic and constantly advancing as technology improves.

Grand Valley's bachelor's program in DMS provides instruction in four sonographic specialties: abdominal, obstetric-gynecologic, breast, and vascular. This is the only DMS bachelor's degree program in the state of Michigan and offers comprehensive education, utilizing traditional lectures, a state-of-the-art imaging lab, patient simulations, and clinical education in local health care systems. Lecture and laboratory courses are taught by practicing professionals and the content includes anatomy, physiology, pathophysiology, physics, instrumentation, professionalism, and research. Clinical education is made possible through partnerships with hospitals and health systems and allows students to learn through immersion in ultrasound departments. Each student rotates through three different clinical



Diagnostic sonographers are utilized by many specialties, including emergency medicine, pediatrics, fertility, oncology, musculoskeletal, and general medicine.

The U.S. Department of Labor's, Bureau of Statistics projects that the ultrasound field will grow 24 percent in the next decade.

education assignments while in the program, gaining invaluable hands-on experience with real patients in diverse settings. Students in the program meet requirements necessary to take national board registries through the American Registry of Diagnostic Medical Sonography (ARDMS) prior to completing the program, allowing them to become board-registered sonographers immediately upon graduation.

The U.S. Department of Labor's Bureau of Statistics projects that the ultrasound field will grow 24 percent in the next decade, which it describes as "much faster than average growth." Sonographers are currently in demand in the labor market and find employment in a variety of settings, including clinics and physician offices, traveling ultrasound services, research institutions, and hospitals.

Shannon Scott graduated from Grand Valley's DMS program in April of 2016, and has recently found employment at Spectrum Health, Grand Rapids. She reflects on her

program choice: "Originally, I looked at ultrasound as a job that I probably wouldn't get bored with because of the diversity of things I would be doing. As graduation approached and I searched for employment, I realized that sonography is so much more than that now. Sonography is a chance to make connections with people and really help them by finding out the root of their problems. It's a chance for me to use my problem-solving skills to properly represent pathology. I'll be able to use my brain, while still making use of my fine motor skills. There is always something new to learn and challenge me. With ultrasound, the opportunities are endless and I can take this career in any direction I want."

For more information about the program, contact Miriam Teft at teftm@gvsu.edu.

Continuing Education in Physical Therapy

The Grand Valley State University Department of Physical Therapy (DPT) and Center for Adult and Continuing Studies are sponsoring a new initiative called Professional Development Opportunities for Physical Therapists. This initiative offers high-quality, low-cost professional development courses to Grand Valley physical therapy alumni, clinical partners, and local physical therapist clinicians. Courses will be offered at Grand Valley three to four times per year in a variety of physical therapy practice areas.

For Michigan physical therapists, the credits obtained through this program can be used toward the Professional Development Requirement (PDR) credits required for state license renewal. Physical therapists will need to accumulate 24 PDR credits or hours during the July 2017 through July 2019 renewal period.

The inaugural course of this initiative, Throwing Biomechanics: Assessment and Training, was offered in January 2016 and was taught by Daniel Wolocko, P.T., S.C.S., C.S.C.S. Wolocko is the director of Mercy Elite

Sports Performance and Therapy at St. Mary Mercy in Livonia. He is a 2002 graduate of Grand Valley State University with a Master of Science degree in physical therapy, as well as a board-certified clinical specialist in sports physical therapy and a specialist in strength and conditioning through the National Strength and Conditioning Association. Wolocko also is certified as a pitching coach through the National Pitching Association and as a golf fitness instructor through the Titleist Performance Institute. He specializes in the assessment and training of body movement to enhance sport performance and prevent injury.

Courses and topics will be developed throughout the year for both the professional development program and the annual DPT Research Day held each year in July on Grand Valley's Robert C. Pew Grand Rapids Campus. The DPT Research Day provides additional opportunity for physical therapists to receive credit toward professional development requirements and to learn about the research of the current DPT graduating class. Information on professional development programming can be found at www.gvsu.edu/ptpd/. Please direct questions about programming to Corey Sobeck at sobeckc@gvsu.edu.



Professor Cathy Harro poses with students (left-to-right) Andrea Shefferly, Kelly Conley and Chelsea Garascia platform presentation winners at the 2016 DPT Research Day.

Scribe Academy Plans for Expansion

The Grand Valley Scribe Academy is expanding to Zeeland during the Fall 2016 semester.

The scribe academy is a collaborative partnership between Grand Valley's Office of the Vice Provost for Health and Emergency Care Specialists of Grand Rapids that started May 2015. Students are offered a free training program that qualifies them for positions as paid scribes in hospital emergency departments. To date, more than 50 students have completed the training and are employed as scribes at Spectrum Health emergency departments in Grand Rapids.

The scribes work with emergency department providers to document patient care through the use of electronic medical records. Dr. Joshua Kooistra, a staff member in the emergency department at Spectrum Health Butterworth Hospital, said working with scribes allows him more time to communicate with patients. "It allows me to interact more effectively with my patients," Kooistra said. "I can focus on the story a patient is telling me without having to have record responses in a computer or chart during my interaction."

The scribe training program includes four weeks of online and classroom instruction and 40 hours of working in an emergency department. Participants are then expected to commit to a minimum employment term of 18 months, with an average of two shifts per week.

Clark Vredevoogd graduated from the first scribe training program last May. He said he was searching for meaningful employment after graduating from Michigan State University and before applying to medical schools.

"My goal during that time was to find a position that would challenge me both personally and professionally, and provide me with the opportunity to gain unique medical experience," Vredevoogd said. While in an emergency department, Vredevoogd documented the interactions between providers and patients. He said the process made the provider more efficient and improved the patient's experience.

Jean Nagelkerk, Ph.D., F.N.P., F.N.A.P., vice provost for health at Grand Valley, said ideal candidates for the program are college students who are interested in pursuing health care careers or college graduates with degrees in the health professions or sciences.

For more information about the program, visit www.gvsu.edu/scribe/.

More than 50 students have completed the training and are employed as scribes at Spectrum Health emergency departments.



The medical scribe documents the details of a patient visit, allowing a more effective interaction between provider and patient.

Grand Valley State University Student Enrollment in Specific Health and Health-related Programs

These numbers highlight the diversity and variety of health-related programs at Grand Valley State University for Fall 2016. They demonstrate the potential positive effect of future Grand Valley alumni on the health care industry in Michigan, across the country, and around the world.

GVSU offers
75 health-related
 programs.

Aging and Adult Life (Minor)	31
Allied Health Sciences — American Sign Lang Interpret (Bacc.)	16
Allied Health Sciences — General Allied Health Sciences (Bacc.)	96
Allied Health Sciences — Histotechnology (Bacc.)	1
Allied Health Sciences — Pre-Dosimetry Studies (Bacc.)	3
Allied Health Sciences — Pre-Physical Therapy Services (Bacc.)	66
Allied Health Sciences — Pre-Physician Assist Studies (Bacc.)	275
Allied Health Sciences — Respiratory Care (Bacc.)	14
Allied Health Sciences — Speech-Language Pathology (Bacc.)	224
Applied Behavior Analysis (P.B.Cer.)	8
Athletic Training (Bacc.)	246
Behavioral Neuroscience (Bacc.)	38
Biochemistry (Bacc.)	58
Biology — Genetics & Cell/Molecular Bio (Bacc.)	21
Biology — Physical Therapy (Bacc.)	13
Biology — Pre dental (Bacc.)	19
Biology — Premedical (Bacc.)	46
Biology — Preosteopathic (Bacc.)	3
Biomedical Engineering (Minor)	70
Biomedical Informatics (P.B.Cer.)	1
Biomedical Sciences (Bacc.)	1,114
Biomedical Sciences — Microbiology (Bacc.)	34
Biomedical Sciences — Nutrition Sciences (Bacc.)	49
Biomedical Sciences (M.H.S.)	15
Biostatistics (M.S.)	35
*Business General — Health Sector Management (M.B.A.)	0
Cell and Molecular Biology (Bacc.)	88
*Cell and Molecular Biology — Genetics and Cell/Molecular Biology (Bacc.)	0
Cell and Molecular Biology — Biotechnology (M.S.)	30
Cell and Molecular Biology — Research (M.S.)	7
Chemistry — Biochemistry and Biotechnology (Bacc.)	33
Clinical Research Trials Management (PBCER)	3
Diagnostic Medical Sonography — Echocardiography and Vascular (Bacc.)	49
Diagnostic Medical Sonography — General (Bacc.)	101
Engineering — Biomedical Engineering (M.S.E.)	6
Exercise Science (Bacc.)	53
Exercise Science — Clinical Exercise Science (Bacc.)	667
Exercise Science — Health Fitness Instruction (Bacc.)	312

Health Administration (M.H.A.)	72
Health Communication (Bacc.)	103
Health Information Management (Bacc.)	55
Healthcare Information Systems (Minor)	76
Medical & Bioinformatics (M.S.)	26
Medical Dosimetry (M.S.)	17
Medical Laboratory Science (Bacc.)	86
Nursing (Bacc.)	1,268
Nursing (D.N.P.)	1
Nursing — Adult/Older Adult Clinical (D.N.P.)	76
Nursing — Child/Adolescent Clinical (D.N.P.)	16
Nursing — Health Systems Leadership (D.N.P.)	9
Nursing — Nursing Admin & Health Care (D.N.P.)	3
Nursing (M.S.N.)	5
Nursing — Advanced Generalist (M.S.N.)	14
Occupational Safety/Health Management (Bacc.)	64
Occupational Safety/Health Management (Minor)	3
Occupational Therapy (M.S.)	132
*Palliative and Hospice Care (P.B.Cer.)	0
Physical Therapy (D.P.T.)	169
Physician Assistant Studies (M.P.A.S.)	137
**Pre-professional Preparation (Bacc.)	862
Psychology (Bacc.)	1,067
Psychology (Minor)	598
Public Administration — Health Administration (M.P.A.)	21
*Public Health — Epidemiology (M.P.H.)	0
Public Health — Health Promotion (M.P.H.)	1
*Public Health — Public Health Administration (M.P.H.)	0
Public and Nonprofit Admin — Community Health (Bacc.)	70
Radiation Therapy (Bacc.)	110
Radiologic & Imaging Sciences (Bacc.)	56
School Health Education (Minor)	68
School Psychology (M.S.)	26
School Psychology (Psy.S.)	26
Social Work (Bacc.)	466
Social Work (M.S.W.)	347
Speech-Language Pathology (M.S.)	80
Therapeutic Recreation (Bacc.)	144
***Unduplicated Count	9,270

*First enrollments will occur Winter 2016

**Grand Valley tracks and advises undergraduate students who intend to apply to graduate programs in health fields, regardless of whether those students pursue a health-related undergraduate major. Although these students do not necessarily earn a health-related credential from Grand Valley, they are guided to coursework and activities that will optimally prepare them for admission to their destination programs. This program is not counted as a traditional program.

***Beginning in 2016, the Annual Health Report will use enrollment counts from the fall semester only. Reports in previous years used full academic year counts. Numbers will not be directly comparable to prior year counts.



ADVANCING EDUCATION

First-rate faculty and experiential learning — particularly student/faculty member collaboration and research — are two of the foundations of a Grand Valley education. Innovation born of these values is especially evident in health profession programs where faculty members work hand-in-hand with students and other community resources to find practical solutions to real health-related issues.



University Signs Early College Agreement with Rockford High School

Through a new partnership with Grand Valley, Rockford High School students can take college courses in a health professions program without leaving their school.

University leaders joined Rockford Public Schools (RPS) representatives April 28 to officially sign the early college agreement.

The early college program began in the fall; students can obtain six credit hours in the allied health science bachelor's degree program, which will be taught at Rockford by a Grand Valley faculty member and will include discussion sessions led by a Rockford high school teacher. Two courses are offered: Medical Terminology and Introduction to Health Care.

Jean Nagelkerk, vice provost for health, said it works to a student's advantage to take college



Rockford Public Schools Superintendent Michael Shibler talks prior to press conference regarding the new early college program agreement.

credits early. “This gives high school students an opportunity to explore health as a career and to start their first semester of college, with six credits,” Nagelkerk said.

President Thomas J. Haas said he was pleased to collaborate with Rockford Public Schools. “We’ve invested mightily in our nursing and health professions programs, and what we’re seeing is when our students graduate from these programs, they stay in the area to work,” Haas said.

Michael Shibler, superintendent for RPS, said the program provides high school students with college experience, an early look at possible careers, and helps to reduce their college loan debt. “This is really a tremendous advantage for our students and their parents,” Shibler said.

Physical Therapy Residency Programs

The American Physical Therapy Association encourages physical therapists to gain expertise in specialized areas of physical therapy through participation in postprofessional educational residency programs. Grand Valley State University and Mary Free Bed Rehabilitation Hospital have a successful, longstanding

partnership offering two such postprofessional residency programs: the Lulenski Neurologic Residency in Physical Therapy and the Residency in Pediatric Physical Therapy. The neurologic residency is led by residency director, Christina Platko, D.P.T., and Grand Valley faculty member, Cathy Harro, P.T., M.S., N.C.S. This residency program was initiated 13 years ago with financial support of Gary Lulenski, M.D., in honor of his son who sustained a serious brain injury. The pediatric residency, generously funded by the Mary Free Bed Guild, was started nine years ago and is led by the Mary Free Bed Pediatric Team and Grand Valley faculty member, Lisa Kenyon, P.T., D.P.T., Ph.D., P.C.S.

Residency programs provide advanced clinical training in an integrated environment of clinical excellence, research, and education. Additionally, residents are mentored in clinical research and assist in laboratory teaching for the Grand Valley Doctorate of Physical Therapy degree. Given the intensive mentoring provided to each resident, each residency program accepts only one resident per year. To date, 13 residents have completed the Lulenski Neurologic Residency and nine have completed the Residency in Pediatric Physical Therapy. Both residency programs are exploring the possibility of future accreditation through the American Board of Physical Therapy Residency and Fellowship Education.

Past residents have expressed how beneficial the residency has been in shaping them as professionals. Past pediatric resident, Sarah Pipher, P.T., D.P.T., stated, “The residency allowed me to spend a year integrating research with my clinical practice. I received intensive, structured, clinical mentorship that is not typically provided in most entry-level positions. I was also involved in a multi-institutional research project (and) worked with my research mentor to submit two case reports for publication.” Pipher is currently employed as a pediatric physical therapist at Mary Free Bed Rehabilitation Hospital.

Assessing Newborns

Why is she blue? Are you hurting her? Is she going to be okay? These are the questions often voiced by concerned parents immediately after their baby is born. The scene is a delivery room, and Deborah has just delivered a baby. The baby is covered with a white substance (vernix) and is making grunting noises. The baby is not moving and her lips and area surrounding the mouth are light blue in color. The student nurses are suctioning the baby's airway, wrapping her with a blanket and rubbing her, while calculating points for color, muscle tone, heart rate, respirations, and reflex irritability. Finally, the grunting turns to a healthy cry, her color goes from blue to pink, and the baby starts to move her arms and legs.

This delivery room was not in a hospital as you may think, but takes place in the Grand Valley Simulation Center. Dad is actually another nursing student playing the role of father. The mother is a manikin being "voiced" by a simulation center staff member, and the physician is a faculty member. The star of this scenario is actually a high-fidelity neonatal simulator named SimNewB. This manikin has realistic anatomy such as pulses, chest movements, and an umbilicus with a life-like pulse that can also be accessed for intravenous therapy. It looks and can act just like a real newborn. SimNewB is computer-operated and allows students the opportunity to experience a wide range of possible conditions encountered in newborn care. Instructors are able to change SimNewB's condition based on the students' learning needs.

Manikins like SimNewB are important in providing high-quality clinical experiences for students. The changes in health care over the past few decades have impacted the number of clinical experiences available for students. The transition of care from hospital settings to outpatient settings, patient safety initiatives, and the number of health care professions programs contribute to the competition for pediatric clinical sites.

Physician assistant studies (PAS) faculty incorporated a newborn simulation experience into their curriculum this past fall for the first time. According to PAS faculty member Mandy German who facilitates a simulation with SimNewB, "We no longer have a core pediatric clinical experience. All of [the students'] pediatric experience comes from their family practice, rural/underserved, and emergency rotations, unless they choose a pediatric elective rotation. By using the simulation lab, all of the students have the opportunity to experience the newborn assessment, and we as faculty can evaluate and confirm they have developed the skills to assess a newborn."

Many patient situations can be replicated in the Grand Valley Simulation Center, where students are able to think through patient care issues and practice newly learned skills in a safe learning environment. If students make mistakes, they are able to learn from them without harming patients.

SimNewB manikin allows all students the opportunity to experience newborn assessments.



Students from the physician assistant studies program assess the SimNewB manikin while their professor Mandy German observes.

The ACA interprofessional study was designed by individuals from a variety of professions to provide information from public health, medical, and pharmacology perspectives.



Graduate students from Professor Molla's class conducted a community survey to examine the knowledge level and impact of the Affordable Care Act.

Community as Classroom

Students in the graduate public health course, Health Program Evaluation, led by Professor Azizur Molla, Ph.D., M.P.H., conducted a study to evaluate the Affordable Care Act (ACA), also known as Obama Care. This exploratory study aimed to determine individuals' knowledge of the ACA, as well as their perspectives on the strengths and weakness of the ACA. The objectives of the study were to examine the knowledge level of the study population about the ACA; explore the perspectives of the study population regarding the current health care program based on the ACA; and to document the pros and cons of the ACA as identified by the study population, which consisted of residents of downtown Grand Rapids, MI. In addition, the study was intended to convey the findings to respective stakeholders (health care professionals) through dissemination of the results. This interprofessional study was designed by individuals from a variety of professions to provide information from public health, medical, and pharmacology perspectives. This collaborative project

involved graduate students, as well as faculty from Grand Valley, from the Michigan State University's College of Human Medicine, and from Ferris State University's College of Pharmacy.

Eighteen graduate students in the public health program worked on this project as research assistants and as part of their final project for the class. The students were involved in formulation of the research questions, study design, survey preparation, and data collection. The students were also involved in cleaning, entering, and analyzing data, as well as presenting study findings. This was the first year of the 2015-2018 study (GVSU IRB#16-043-H).

According to the findings, many individuals believe the ACA is an improvement over previous options for health insurance, while others view it as making health care more costly. During a two-week time frame, 179 individuals were recruited at a public venue. Demographics included median age 31 years, 84 percent Caucasian, 63 percent not married, 31 percent completed four years of

college, and 44 percent had incomes exceeding \$50,000. Eleven (6 percent) were uninsured prior to the ACA and two (1 percent) remained uninsured after the ACA. One hundred and forty-three (80 percent) had prescription coverage before the ACA with 119 (72 percent) who reported no change after the ACA. Twenty-three (13 percent) had better coverage after the ACA, and 22 (12 percent) had less coverage. Of the total 106 individuals who supported the ACA, 71 (67 percent) reported no change in their personal insurance after ACA. This finding identifies that, in a sample of upper middle-class individuals, a majority were supportive of the ACA, despite a lack of improvement in their own insurance, indicating that personal sacrifice for the general population may be occurring. Study findings should be helpful to the insurance industry and to policy leaders as ACA policy evolves. This project is an example of how students can utilize their knowledge and skills to assess health needs and play a role in shaping better health care.

Simulating Mental Health Therapy

The evidence is overwhelming — physical health and mental health are inextricably tied. Social workers are an integral part of any health care team. Social workers not only administer programs, coordinate resources, and manage cases, but they also provide mental health counseling. Clinical social workers provide therapy for a host of conditions such as depression, anxiety, bereavement, and substance abuse. Clinical social workers are client-focused and practice active listening, where the clinicians focus on the client's perceptions rather than their own. They demonstrate listening by repeating or reflecting back what the client says.

The standardized patient program at Grand Valley hires community members to portray patients with a variety of conditions and symptoms. Social Work Professor Brandon Youker, Ph.D., M.S.S.W., and his students have been utilizing this aspect of Grand Valley's simulation program for more than three years to develop the skills needed for interviewing future clients.



Social work students listen and observe standardized patient simulation during their class.

A typical social work exercise carried out in a simulated clinical setting involves a standardized patient, a student interviewer, and a student observer. The interviewer greets and accompanies the client to one of the therapy rooms, where the interviewer provides a safe, comfortable environment for the client interview and conducts the initial introductions and discusses confidentiality. The interviewer then begins probing the patient's reasons for seeking treatment. Meanwhile, the observing student views the simulation from a separate observation room.

This scenario allows the interviewer an opportunity to practice interviewing skills, while the observing student has the opportunity to learn by watching, listening, and assessing the interviewer's performance. Immediately following the interview, the student interviewer and standardized patient come out of character and offer feedback about the session. The observer also offers comments on the interviewer's strengths and weaknesses. Each student has additional opportunities to assess their own skills later through a video recording and a reflection paper.

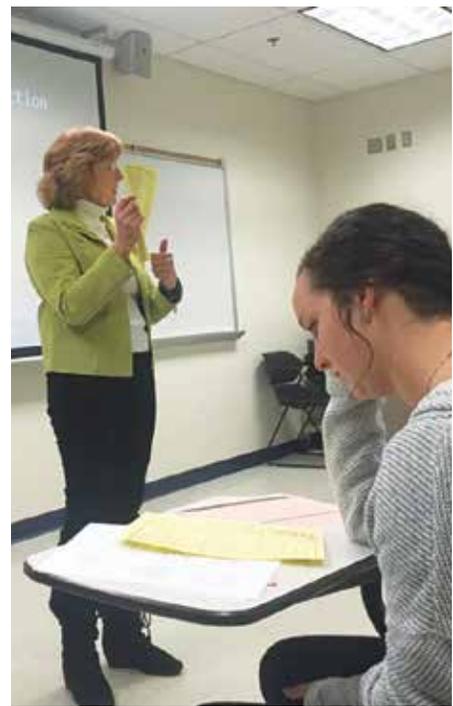
This process provides the student-clinician with feedback from multiple sources and perspectives and encourages self-awareness, assessment, confidence, and discovery. Currently all six sections of the undergraduate course, Interviewing in Social Work, attend the Simulation Center three times during the course. Using standardized patients in a learning-friendly, nonjudgmental environment allows students opportunities to practice listening and assessment skills.

Health Education in HIV and AIDS

Jennifer Olson, M.S., a professor in the Department of Movement Science, incorporated an HIV/AIDS certification program as part of a course to ensure her students will be certified to teach students about this topic in accordance with Michigan

law. The preservice health education minors in Grand Valley's movement science department have an opportunity to complete the Michigan Department of Education certification requirements to provide HIV/AIDS education in school settings. The training is provided by Bev Schroeder, prevention coordinator at the Ottawa Area Intermediate School District. Participants receive a certificate from the State of Michigan indicating they are certified to teach HIV/AIDS in Michigan. The certification training covers epidemiology, history, symptoms, statistics, transmission, treatment, prevention, curriculum, laws, teaching strategies, best practices, and more.

Michigan law (§380.1169) states that, "School districts are required to teach about dangerous communicable diseases, including, but not limited to, HIV/AIDS. Instruction must be offered at least once a year at every building level (elementary, middle/junior, senior high)." The law also states that, "Each person who teaches K-12 pupils about HIV/AIDS shall have training in HIV and AIDS education for young people."



Instructor Bev Schroeder from Ottawa Area Intermediate School District provides HIV/AIDS education training to students in Jennifer Olson's movement science class.

Receiving this certification ensures that graduating health education minors from Grand Valley will be prepared to teach the topics required by the State of Michigan. This year, 27 students attended the four-hour training to become certified. Students indicated they appreciate this opportunity to become certified and learned valuable information for their future work.

Bev Schroeder stated, “This training is a great way for us to partner with our local universities and for us to introduce these new health teachers to the resources and training opportunities provided by their local intermediate school districts and regional school health coordinators.”

A STEM Approach to Respiratory Function

On February 13, 2016, the Association for Women in Science — West Michigan Chapter (AWIS-WM), consisting of faculty members from Grand Valley State University, Van Andel Institute, and Hope College, sponsored the inaugural Fall in Love with STEM, a community outreach program for

middle and high school students to support STEM (science, technology, engineering, and mathematics) activities on the campuses of various colleges.

At Grand Valley’s Cook-DeVos Center for Health Sciences, faculty members and students from the Kirkhof College of Nursing, College of Health Professions, Department of Cell and Molecular Biology, and the College of Liberal Arts and Sciences partnered with Kent Intermediate School District (KISD), a regional educational service agency, to develop an educational experience that involved all components of STEM in a clinical scenario focused on respiratory disorders. Using computer programs and simulation, students had hands-on opportunities to explore the components of the respiratory system and the dysfunction associated with asthma. Moving from the organ system to the cellular level, genetic causes of lung disorders, such as cystic fibrosis, were discussed. Through exploration of lung function, disorders, treatment, and causes, students were able to identify multiple areas for future study and careers.



Faculty members and students from multiple colleges and health programs participated in the Fall in Love with STEM program sponsored by the Association for Women in Science — West Michigan Chapter.



A speech-language pathology student works one-on-one with one of the children from the standardized patient program.

Creating the Clinical Environment in Speech-Language Therapy

Grand Valley State University's standardized patients recreate clinical situations for students in a controlled environment. Sessions with standardized patients mimic therapeutic processes, where students work one-on-one with a "patient," but have the ability to pause and ask questions. Josie Fowler, M.A., C.C.C.-S.L.P., a faculty member in the Communication and Sciences Disorder Department, appreciates the practical experience and community connections provided by standardized patients. "I love when students walk out of the room and don't know if the experience was simulated or not."

The standardized patient program hires adults and children for speech-language pathology (SLP) events, offering students an opportunity to gain experience across the life span. Students engage the standardized patients

through interviewing, practicing therapeutic techniques, administering hearing screenings, swallowing assessments, and providing recommendations. Multiple environments are utilized to create different learning atmospheres, including, a speech/language disorders lab, a neurogenic communication disorders lab, and a hospital setting.

Simulations with standardized patients impact students by bringing real world experience and awareness to various health conditions. Stroke, concussion, dementia, hearing difficulties, traumatic brain injury, and cognitive impairments all have been recreated for students through the program.

For the Winter 2016 semester, more than 100 standard patients assisted with 68 SLP events. Future objectives include having students work with the same standardized patient for a series of sessions, providing the opportunity to establish a therapeutic relationship and track progress over time.

Occupational Therapy Travels to Ecuador

In November of 2015, Grand Valley occupational therapy (OT) students and faculty members traveled to Ibarra, Ecuador, for the third year in a row. This is a level-one, fieldwork experience for students to take their OT skills to a variety of settings, such as nursing homes, a private outpatient clinic, and a day center for adults with severe multiple impairments. Students apply their problem-solving skills, modify and adapt the environment, tap into their creative side, and become more flexible than they ever imagined. The field experience is coordinated by an organization in Ibarra called Centro de Rehabilitacion, Educacion, Capacitacion, Estudios, y Recursos (CRECER). It was founded by Elaine Keane, O.T.D., and Susy Albuja in 2010, when a significant need for occupational therapy services in Ibarra was identified. The name encompasses CRECER's services and goals: to provide rehabilitation, education, training; to conduct research; and to provide resources to the clients and community served by the center.

Under the supervision of Grand Valley OT faculty members and Keane, the students led occupational therapy sessions for clients of all ages and abilities and with conditions that included traumatic brain injury, cerebrovascular accident, autism, and cerebral

palsy. The clients simultaneously received evidenced-based treatment to improve their occupational performance.

Students had the opportunity to provide education to caregivers on appropriate therapeutic techniques to use at home. Students experienced and integrated into the family- and community-centered Ecuadorian culture. The students also were involved with a local university. In celebration of International Day of Disabled Persons, the Universidad Tecnica Del Norte held an adaptive sports event to recognize individuals with disabilities and the importance of participation in sports and recreation to enhance social participation, self-confidence, and overall quality of life. Grand Valley students had the opportunity to participate in this event by engaging in a group activity with psychology students to adapt/modify sports for various limitations. They also had the opportunity to participate in adaptive sports including wheelchair basketball and soccer for blind individuals. The students and faculty provided lectures to the psychology students of Technical University of Ibarra on the importance of inclusive sports for people with disabilities and the care of peripheral nerve injuries.

The OT students described the experience as unforgettable, life-changing, eye opening, exhausting, and amazing. Another trip is planned for fall of 2016.



Occupational students Jennifer Hauer and Alex Mirabatur work with a young child from Ecuador during a therapy session.

Walk to Ghana

In 2010, The Institute of Medicine called for nursing to become involved in the transformation of health care due in part to the profession's focus on promoting healthy lifestyles in a variety of settings. The Affordable Care Act further emphasized the need for nurses to play a big part in teaching and promoting wellness throughout our communities. The Kirkhof College of Nursing (KCON) took this call to action literally in many ways. One effort includes the design of a wellness initiative allowing faculty and staff members to “walk the talk” as role models for the students enrolled in nursing programs. For the past two academic years, KCON faculty and staff members trekked virtually to a destination of significance as a way of reflecting a commitment to good health.

The first year featured a walk to Florence, Italy, the birthplace of Florence Nightingale. The second year was a trek to Cape Coast, Ghana, the location of one of the high-impact, study abroad experiences offered to KCON students each year. Plans for the third walk are underway. The virtual walks total more than 20,000 combined miles round trip to date.

“It is a fun and interesting way to stay healthy and lead by example. Our students know we live what we teach about wellness because of

visible initiatives like this,” said Susan Strouse, assistant professor with KCON. Strouse is among several faculty and staff members and students working on the initiative.

A world map prominently displayed outside the KCON offices in the Cook-DeVos Center for Health Sciences serves as the platform to track progress along the way. Various activities count as miles, allowing employees of all fitness and ability levels to participate. Weekly emails and prize drawings, all with a health promotion focus, encourage ongoing participation. Photos, helpful tips, and healthy recipes shared via weekly emails provide motivation and ideas to keep personal health and wellness top of mind.

“The GVSU Health and Wellness team asked us to establish initiatives promoting healthy living. We decided what better way to make an impact than to lead by example for our future Laker nurses who will play a significant role in sustaining the health of our communities,” shared Cynthia McCurren, KCON dean and professor. “Our efforts to date have been very successful.”

In addition to these virtual walks, KCON faculty and staff members take walking breaks, utilize stand-up desks, and encourage healthy choices.



Faculty member Susan Strouse and nursing student Erin Macauley stand in front of a map depicting the trek to Ghana.

sHaPe Camp

Grand Valley's long-standing Summer Health Activities and Professions Exploration (sHaPe) Camp extended its reach in 2016 with its first sHaPe Camp Alumni Reunion. Traditionally, sHaPe Camp has conducted a one-week day camp providing an introduction to the health professions for boys and girls currently in grades seven and eight. The camp is hosted each year by Grand Valley's College of Health Professions and the Regional Math and Science Center.

In July 2016, sHaPe Camp partnered with the University of Michigan's Future Public Health Leaders Program (FPHLP), Grand Rapids Community College, and Grand Rapids Public Schools to create an event that included sHaPe alumni. The event focused on engaging former campers, who are now high school students in the Grand Rapids Public School system, with current FPHLP participants (undergraduate students from the University of Michigan), on a day-long exploration of public health.

Highlights of the event included pairing groups of students to learn about key areas of public health and take part in interactive

workshops on health prevention and epidemiology. In addition, a professional panel of public health leaders shared experiences in the field with students. A hands-on, make-your-own-lunch was hosted at Grand Rapids Community College (GRCC) by Chef Nancy Rutledge of GRCC Dining Services. The students learned about healthy eating, while building burrito bowls.

"The opportunity to get our two groups of students together, from two different levels of education, to learn more about public health was a great collaboration of resources. The FPHLP students enjoyed interacting and learning alongside like-minded students from Grand Rapids," said Dana Thomas, director of FPHLP at the University of Michigan, Ann Arbor, MI.

According to Ranelle Brew, Ph.D., sHaPe camp director, "Key experiences were highlighted in an effort to increase awareness and educate the next generation of public health leaders about our field. Our efforts focused on expanding the pipeline of youth and college students into the field of public health. The students really enjoyed the exposure to public health and learning more about work that we do in the field."



STUDENT LEADERSHIP, DEVELOPMENT, AND ACHIEVEMENT

Grand Valley attracts the best and brightest students in the health sciences. The average grade point average for students entering each of our top health programs is 3.6 or higher, and scholarship is critical to the success of Grand Valley's health-related programs. Our students and faculty members don't just write papers and collect awards; they organize, design, lead, create, solve problems, and make a difference in the world.



Angel Arms

A team of engineering students is continuing to work with Lylah Gritter, a child with a type I/type II mix version of spinal muscular atrophy (SMA), to help her become more independent. In 2014, a different group of engineering students built a play and mobility device that allows her to move and be mobile.

The new device, a 3D-printed exoskeleton, was created by mechanical engineering graduate students Brooks Schaefer and Joseph Kissling

to allow Lylah to better control her arms. SMA is a genetic muscle disorder that causes extreme weakness.

Lylah's mother, Holly Gritter, said her daughter doesn't have the ability to lift up her arms without assistance, so they needed something that could provide shoulder-to-elbow support. "We were struggling to find ways that would allow her to feed herself or pick up a toy," Holly said. "There wasn't really anything out there to help that we could get easily."

The Angel Arms project was funded through a five-year, \$180,000 grant from the National Science Foundation



Lylah Gritter provides a glowing smile as she plays with toys with the help of the angel arms devised by Grand Valley engineering students.

The current 12-piece prototype, made of plastic, allows Lylah to do tasks, such as color, and feed herself. “Holding a spoon and bringing it to her mouth seems like such a simple thing, but that’s something she can do now with the device that she couldn’t do before,” said Gritter.

The device was created as part of engineering Associate Professor Brent Nowak’s Advanced Medical Device Design class, where students are given a real-world problem and asked to solve it. Students are mentored and guided by faculty members, including physical therapy Associate Professor Lisa Kenyon who works with Lylah, and learn about the design process through multi-disciplinary, project-based learning.

The project began in January when the team researched current devices and conducted observations before the one-month design process began.

“It was an amazing feeling to see the device work the first time we put it on her,” said Kissling, a Texas native. “We did all this design work and testing, so to see Lylah and her mom’s face when it worked was priceless.”

The project was funded through a five-year, \$180,000 grant from the National Science Foundation for Grand Valley students and faculty members to create specialized devices for people with disabilities. Kissling and Schaefer hope to make the design available for others.

For more information, contact Brent Nowak at nowakbr@gvsu.edu.

Solving Real-world Medical Problems with Medical Devices

Medical devices are being developed in the Grand Valley School of Engineering through a collaboration with Spectrum Health Innovations (SHI), a subsidiary of Spectrum Health that helps health staff members develop and launch original ideas, including health care products and technologies. Physicians and medical staff come to SHI with ideas, and through the SHI/GVSU collaboration agreement, they work with students who are challenged with developing the ideas and building prototypes.

Dr. Brent Mulder, senior director of SHI, said working with Grand Valley students has been an invaluable experience. “The clinicians are excited to see their ideas come to life and students get real-life experiences by building something new and working with medical professionals,” he said.

Talks for creating a partnership began in 2011, when the Seymour and Esther Padnos School of Engineering and Computing began offering a medical device design class as part of the then-new biomedical engineering master’s program. Grand Valley offers the only graduate-level biomedical engineering degree program in Michigan that focuses on medical device design and development.

John Farris, professor of engineering who teaches the medical device design class, said the collaboration is beneficial for both groups.

“My students have been a part of projects they have never imagined,” Farris said. “The product designs and prototypes developed through this collaboration have led to patents being filed, students winning business plan competitions, and students licensing intellectual property from Spectrum Health Innovations to start their own companies.”

One such company was created by Eric Van Middendorp, a Grand Valley engineering alumnus, who developed an Endotracheal Tube Holder as a graduate assistant at SHI, where he now works as a mechanical design engineer. The device provides structural support for breathing tubes connected to patients. He has won several business plan competitions, including GreenLight Michigan Business Model Competition, where he took first place and received \$25,000 to further develop his device.

The first project of the collaboration began in April 2014. Most recently, students presented their designs and devices during an event in December 2015. The projects included an in-bed exercise machine, an intravenous drug pump for home use, and a female external urinary device.

Alex Roh, a product design and manufacturing engineering major from Hudsonville, worked on the in-bed exercise machine that aims to improve the physical therapy process for patients who have had knee or hip replacement surgery and cannot bear their full weight. The goal was to produce a lightweight, portable device that could provide active therapy for a patient, while they remain in their hospital bed.

“Our attempts to meet all the specifications resulted in many late nights of brainstorming, designing, and discussion, but it was worth it. Being able to take an idea through the design process and ending with a finished product was a great experience that exemplified what it really takes to develop a new product,” said Roh.

The collaboration agreement also includes involvement from staff members and professors in the Grand Valley School of Computing and Information Systems and Richard M. and Helen DeVos Center for Entrepreneurship and Innovation.

For more information, contact John Farris at farrisj@gvsu.edu.

The product designs and prototypes developed through this collaboration have led to patents being filed.

The project has very tangible short-term and long-term impacts on both the students and the Red Wings organization.

Red Wings Training Camp

For the past two summers, Ross Sherman has assisted the Detroit Red Wings hockey organization with preseason training camps in Traverse City, MI, and has taken 20 and 30 undergraduate students from the athletic training and exercise science degree programs with him. Students assist with running a battery of injury screening and physical fitness tests across a two-week period. This experience requires students to utilize all of the theoretical and practical skills they have learned in class and apply them in an extremely high-pressured environment with elite, professional athletes. While working in the training camps, students learn to interact with the players and management, potentially develop their professional networks, and represent themselves, their program, and the university. Both athletes and management from the Red Wings organization have commented on the students' professionalism and excellent work.

This project has very tangible short-term and long-term impacts on both the students and the Red Wings organization. In the short term, students gain valuable high-impact experiences serving a population with whom very few professionals in their respective fields get to work, which is a tremendous resume builder. This is definitely a once-in-a-lifetime experience for students. The Red Wings also benefit from this project, as the expertise and knowledge of our students conducting the tests improve the quality of the testing and the usefulness of the data collected. The students' work assists the strength and conditioning coach and athletic training staff to develop more specific fitness programming, recovery strategies, and rehabilitation interventions for players. Thus, the quality of the exercise programming and rehabilitation interventions used during the upcoming season is enhanced. In the long term, this project and continued relationship between Sherman and the Detroit

Red Wings is enabling future groups of students to work in the training camps, as well as open up other possible avenues of future work, including collaborative research studies and student internships.

Health Care Professionals Graduate Student Alliance

The Health Care Professionals Graduate Student Alliance (HPGSA) is a graduate student organization offering networking, education, and leadership development opportunities to Grand Valley students studying health care administration. Most members are enrolled in the Master of Health Administration, Master of Public Administration, or Master of Public Health programs. HPGSA is the Grand Valley student chapter of the American College of Health Care Executives. (ACHE). Students have opportunities to network with health care executives, find mentors, and receive education on the latest in what it takes to work in the ever-changing health care environment. ACHE also provides support in resume writing and job opportunities.

The officers of Grand Valley's HPGSA chapter attended the 2016 ACHE Congress in Chicago in March and funds were obtained to send three additional students, who were selected through an essay writing competition. A student track at the ACHE Congress provided a great opportunity for the students to network with health care executives for internships and job opportunities.

This year, Grand Valley's HPGSA offered six educational events for members:

- September's event featured alumni Michael Breon and Heather DeCoster speaking about benefits of ACHE membership and how to be successful in obtaining a fellowship or internship.

- Paige Fults, manager of advocacy, Michigan Hospital Association, gave an update on what was happening legislatively in health care at the October event.
- In November, Michelle Hoppes, president and CEO of the Michigan Professional Insurance Exchange, presented the topic enterprise risk management.
- A total of 38 students participated in January's event, which featured Tina Freese-Decker, president of Spectrum Health Hospital Group, and Gwen Sandefur, chief operating officer of Spectrum Health Hospital Group. Topics that were covered included the Affordable Care Act, Medicaid expansion, value-based reimbursement, population health, ICD-10, telehealth, strategic planning, and the American College of Health Care Executives (ACHE). Freese-Decker is the regent for ACHE in Michigan and explained her role and the benefits of joining ACHE.
- Michael Regan from Cherry Health talked about leading a federally qualified health care center at the February meeting.
- The March event featured presentations about writing resumes and working with health care recruiters.
- The capstone of the year was the March ACHE Congress.

All events are held at Grand Valley's DeVos Center on the downtown campus. Questions about the chapter can be directed to HPGSA@mail.gvsu.edu. Sue Nieboer, M.P.A., C.E.C., R.N., is the faculty advisor for HPGSA and executive-in-residence for the Master of Health Administration program.

Saving Lives Matters (Michigan Blood)

Students from the health communication senior seminars have partnered with Michigan Blood to help this nonprofit organization meet its goals, save lives, and create an opportunity for the students to put into practice what they've learned in their major coursework.

Michigan Blood's mission statement is "Helping people make a lifesaving difference through blood products and service excellence." This goal is primarily achieved by collecting blood donations and by adding to the national bone marrow registry through their Be the Match program. This partnership has resonated deeply for Professor Lorie Jager, M.A., who spearheaded the initiative. Both of her children have had blood transfusions during extended illnesses. Jager noted, "Without the donations of blood, my children wouldn't be alive and well today. During their illnesses, I met numerous families with children who received bone marrow transplants. I saw first-hand the implementation of Michigan Blood's mission."

To allow for a more in-depth experience, small groups were created within the classes and were given specific assignments. One student group was responsible for researching the Michigan Blood organization and the past participation data; another worked on promotional strategies; and the final group recruited donors and volunteers. The work done by these groups provided Michigan Blood with new tools for making their efforts more successful, a number of which have been adopted and added to the organization's training programs and materials.

**Potentially, 294
lives were improved
or saved due to the
students' efforts.**

According to Amy Smith, Michigan Blood program consultant, “The health communication students’ blood drives are a tremendous support to the local blood supply. We make commitments to Michigan hospitals based on our collection goals, so it’s very important that we meet those goals. Their November 2015 drives collected a total of 98 units (pints) of blood. Since each unit helps three patients on average, potentially 294 lives were improved or saved due to the students’ efforts. Michigan Blood and the patients they serve are incredibly grateful!” In addition to the blood drives, a previous class hosted a bone marrow registry event, where 102 people registered to be potential bone marrow donors.

Grand Valley’s health communication major was established in the late 1980s and is one of approximately 25 in the country.

Student Advances Research

Many students receive some research experience while pursuing undergraduate degrees at Grand Valley. Some of these students achieve beyond most expectations. Exercise science students Grace Couture and Dustin Karlik are examples of exemplary research achievement. Beginning in 2013, Couture and Karlik began as research assistant volunteers with Professor Steve Glass, Ph.D., in Grand Valley’s Human Performance Lab, examining muscle activation patterns during instability training. Squeezing in time between classes, they helped develop research procedures and assisted with data collection. They presented their work at Grand Valley’s Student Scholars Day.

Wanting to achieve more, Couture worked with Glass and Brian Hatzel, Ph.D., to design a research study for her Frederik Meijer Honors College senior project. She developed the study proposal, obtained research approvals, and, along with Karlik, collected data and analyzed the results. The project, entitled “Effect of Foam Rolling on Hamstring Range of Motion,” was accepted for publication in the *Open Orthopaedics Journal*.



President Tom Haas and Louie the Laker listen attentively to details of the research project conducted by Grace Couture (pictured) and Dustin Karlik.

Following this accomplishment, both Couture and Karlik completed research internships in exercise physiology and biomechanics labs to gain additional experience. Couture currently is pursuing her doctoral degree in physical therapy at The Ohio State University, where she secured a one-year fellowship. Karlik currently is pursuing his doctoral degree in physical therapy at Grand Valley State University.

PIPES – An Interprofessional Student Organization

Promoting Interprofessional Education for Students (PIPES) is a student organization housed under the Midwest Interprofessional Practice, Education, and Research Center (MIPERC) at Grand Valley State University. PIPES was established in 2010 to provide opportunities for health profession students to learn with and from other disciplines, to enhance professional development, and to facilitate collaborative practice while providing quality health care. These objectives are achieved through group activities, guest speakers, and simulation events that are held during the fall and winter

semesters in Grand Valley's Cook-DeVos Center for Health Sciences building.

PIPES activities are organized by the MIPERC Simulation Champion Work Group. Simulations used in the PIPES activities are custom-designed by the work group for registered students to reflect students' disciplines and learning levels. Members of the work group include faculty and staff members from Grand Valley State University, Michigan State University College of Human Medicine, and Ferris State University. PIPES meetings are open to all area students enrolled in a health-related program.

In February 2016, PIPES tested a postconcussive assessment simulation, which the work group modified, and brought back for a second run in March 2016. The simulations drew 26 students and 80 students respectively. Nursing students were trained to portray the clients: a 16-year-old gymnast who had fallen in a vaulting accident and an overbearing parent. Interprofessional teams were provided with information about concussions and tools to assess client functioning prior to the simulation. On the day of the event, each group had time to determine

PIPES meetings are open to all area students enrolled in health-related programs.



Students role play as patient, parent, and clinician in this student organization (PIPES) simulation.

Lamb is the American Physical Therapy Association's student core ambassador to the State of Michigan, and she is the only student serving on the MPTA Development Committee.

their plan of action and 50 minutes to assess the client situation. Attendees then participated in a 30-minute group debrief at the end.

Disciplines represented by the participating students included medicine, nursing, physician assistant studies, physical therapy, public health, health care administration, occupational sciences and therapy, pharmacy, allied health sciences, and athletic training.

During the 2015-2016 academic year, PIPES held a total of eight events. In addition to simulations, guest speakers were featured to discuss "Interprofessional Collaboration in the Care of Lung Transplant Patients" and "Properly Presenting Your Patient." Additional events included a film screening and a discussion/planning session on "How Inequality is Making Us Sick" led by faculty members from Grand Valley's nursing, occupational sciences and therapy, and public health programs. Students also participated in the DeVos Medical Ethics Colloquy "Is America Going to Pot?" which included a meet and greet with the speakers.

For more information about the PIPES organization, contact Doris French at frenchdo@gvsu.edu.

Glenn A. Niemeyer Award Recipient

Crystal Lamb, a student in Grand Valley's doctoral physical therapy program, was a 2016 recipient of the Glenn A. Niemeyer Outstanding Graduate Student Award. The award is offered annually to students who are well-rounded individuals with demonstrated excellence in both the classroom and extracurricular activities.

According to Department Chair Dan Vaughn, "Ms. Lamb has excelled in the Department of Physical Therapy program across all sectors. As she approaches graduation, she will be regarded as one of the most outstanding students to matriculate in our program, across its 30-plus year history. The breadth of her engagement within the program, the local community, and the professional community is exemplary."

In addition to receiving the Niemeyer award, Lamb received the 2016 Graduate Dean's Citation for Academic Excellence for Promoting Inclusion and Diversity at Grand Valley and the 2015 Michigan Physical Therapy Association (MPTA) Outstanding



Crystal Lamb displays the sign she used to bring awareness to public health issues in Lansing, Michigan.

Student Physical Therapist Award. These awards depict her commitment to academics, service, and professional engagement. With respect to the latter, she is the American Physical Therapy Association's (APTA) student core ambassador to the State of Michigan, and she is the only student serving on the MPTA Development Committee. She is also an officer on the MPTA Student Relations Committee.

Lamb's commitment to service and diversity is made evident in her role at Grand Valley's Pro Bono Clinic, where she is a student coordinator. She also works with an adult member of our community with cerebral palsy by assisting in the delivery of a personalized exercise program for that client. In these capacities, she works with a diverse and underserved segment of the local population. Lamb is also a volunteer student physical therapist at the Bay Cliff Health Camp, where she works with special needs children, ages 4-18.

Dr. Susan Talley, MPTA president, said, "Crystal's dedication to serving her profession is exemplary. Not only is she impacting the student physical therapists in Michigan, she is impacting professional awareness in early career PTs. Crystal is a standout in our profession. I have never met a student who is so passionate about the big picture — becoming an evidence-based practitioner and advocating for the profession."

Physical Therapy Student Awards

The following students received awards during the 2015-2016 academic year.

David Daniels Scholarship: Courtney Brewis and Emilee VanHoven (Class of 2016)

Michigan Physical Therapy Association Outstanding Student Award: Crystal Lamb (Class of 2016)

Team Rehab Scholarship: Melanie Koops (Class of 2016)

Physical Therapy Departmental Honors Award: Megan Kaiser (Class of 2015)

Graduate Dean's Citation for Academic Excellence in the Major: Erica O'Neal (Class of 2015)

Graduate Dean's Citation for Excellence in Leadership and Service to GVSU: Alaina Vince (Class of 2015)

Graduate Dean's Citation for Excellence in Service to the Community or Profession: Patrick Lawrence (Class of 2015)

Graduate Dean's Citation for Promoting Diversity and Inclusion at GVSU: Alicia Marquis (Class of 2015)

Graduate Dean's Citation for Outstanding Final Project: Cailee Gallagher, Lyndsay Hammond, and Lauren Webster (Class of 2015)

Phi Kappa Phi Induction: Melissa Kay and Chelsea Dingman (Class of 2015)



PRECEPTORS

Grand Valley students get valuable exposure to the real world of health care by working with professional preceptors. Preceptors supervise students' clinical activities and monitor their educational process. Clinical teaching encourages preceptors to seek out and organize new knowledge allowing them to add to their knowledge base while gaining personal satisfaction from preparing the next generation of health professionals.



Preceptor Perks Program and Affiliation Agreements

Grand Valley has a strong tradition and commitment to community involvement. This commitment integrates an array of extraordinary formal and informal experiential learning opportunities that enhance student knowledge by connecting theory to practice.

Grand Valley currently has nearly 1,500 affiliation agreements with various organizations around the globe. In addition to the conventional health-related internships required for graduation, programs within Grand Valley's College of Health Professions and Kirkhof College of Nursing offer local

and international volunteer, service-learning, and research opportunities working with children and adults with various educational needs, health challenges, and disabilities in diverse communities.

To protect everyone involved in experiential education — students, faculty members, and the community served — certain participation policies have been established at Grand Valley by the Health Compliance program located within the Office of the Vice Provost for Health. Based on state and federal statutory regulations and accreditation standards for academic programs and affiliated facilities, students and faculty are required to comply with certain health, safety, and legal requirements prior to and throughout all experiential learning opportunities.

Grand Valley currently has nearly 1,500 affiliation agreements with various organizations around the globe.

Grand Valley appreciates and values the experiential learning opportunities provided by its affiliated community partners. In recognition of these collaborations, Grand Valley offers health care professionals serving as preceptors and student mentors access to the Grand Valley Preceptor Perks program. The perks include a gratis university title, Grand Valley library privileges, Fieldhouse access, free continuing education, and Grand Valley employee community discounts.

To learn more about Preceptor Perks, visit www.gvsu.edu/vphealth or contact Katie Branch at branchka@gvsu.edu.

Biostatistics Preceptor

For the past seven years, students in the biostatistics professional science master's (PSM) program have interned with Darren Lubbers, Ph.D., of Integrated Health Analytics (IHA). As a psychologist, Lubbers utilizes his social science training as he works with organizations such as Community Mental Health of Ottawa County (CMHOC) and Hope Network to optimize client service and improve clinical outcomes. Organizing, analyzing, and interpreting data are major components of that effort, and that's where the biostatistics interns are involved.

A typical internship requires a minimum of 440 hours and involves running statistical analyses, creating reports, and giving regular presentations. Findings produced by Kayleah Groeneveld, who graduated in April, resulted in programmatic changes at Hope Network following her presentation to their leadership team. When Jaimie Brandon, a current IHA employee, was an intern, she worked with health care providers at CMHOC. Jaimie used statistical process control charts to create visual representations of the number of monthly patient screenings. Findings facilitated the tracking of center usage, predicted periods of peak usage, and detected abnormally high or low usage patterns that required further investigation.

The relationship between Lubbers and the biostatistics program continues to grow and strengthen. The PSM programs gave Lubbers the 2015-16 Outstanding Employer Award in recognition of his work. Both of the analysts currently employed by Integrated Health Analytics are graduates of Grand Valley's biostatistics program, and they actively participate in alumni events. Working with Hope Network has expanded the reach of the biostatistics program and opened new opportunities for graduates.



Dr. Darren Lubbers, Ph.D.

Medical Lab Sciences Preceptor

Lilianne Scholl was the recipient of the 2015 Medical Laboratory Science (MLS) Midwest Interprofessional Practice, Education, and Research Center (MIPERC) Preceptor Award in her discipline. Scholl is not only a preceptor for the program but is also an adjunct instructor in the program and a graduate of the MLS program. Scholl works in the lab at Spectrum Health's Zeeland Community Hospital, where she has taken on the roles of both teacher and mentor to Grand Valley MLS students. She is recognized for her ability to make students feel welcome and a part of the Zeeland Community Hospital "family." Her positive attitude and respect for students encourages them to step out of their comfort zones and develop the skills necessary for success as medical laboratory scientists. Despite the additional workload placed on her as a preceptor, her nominator stated that "she seems to truly enjoy teaching."

Scholl is one of hundreds of preceptors in Grand Valley's MLS program. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and incorporates 36 weeks of professional classroom coursework and an



Lilianne Scholl, M.L.S.

additional 18 weeks, 40 hours a week, of clinical experiences in numerous hospital laboratories throughout West Michigan. The students' clinical experiences allow them to rotate through all of the departments of the laboratories: hematology, clinical chemistry, immunology, transfusion medicine, phlebotomy, hemostasis, urinalysis, and microbiology. During the 2014-2015 academic year, 21 students were placed in 12 different clinical laboratories, where they received clinical experiences alongside staff and certified medical laboratory scientists.

Scholl is one of hundreds of preceptors in Grand Valley's MLS program.

Leppard has served as a clinical instructor for Grand Valley physical therapy students for more than 10 years.

Physical Therapy Preceptor

Steve Leppard received his Master of Science in physical therapy from Grand Valley in 2000 and has served as a clinical instructor for Grand Valley physical therapy students for more than 10 years at Physiotherapy Associates in Kalamazoo, MI. Leppard demonstrates a dedication to clinical education by providing experiences to students at all levels. He uses innovative teaching models, including a collaborative learning model in which a first- and third-year student from the doctoral of physical therapy (D.P.T.) program participate in clinical education experiences together. Two former students both used the phrase “goes above and beyond” to describe Leppard as welcoming, always available, and providing clear and thorough explanations, while also stimulating creativity and students’ abilities to think for themselves.

Leppard also serves as the center coordinator of clinical education (CCCE) for multiple clinics of Physiotherapy Associates in southwest Michigan, and in this role, he inspires other staff members to serve as clinical instructors. Leppard encourages staff members to attend D.P.T. Research Day at Grand Valley to support former students and for continued professional development.

In addition to serving as a model for excellence in clinical practice and education, Steve models the physical therapy core value of social responsibility. He facilitates the donation of thousands of dollars of rehabilitation equipment to a Hearts in Motion clinic in Guatemala at which groups of Grand Valley therapy students and faculty members provide therapy services each summer. Leppard has been a valuable partner both for the Department of Physical Therapy and for the education of D.P.T. students.



Steve Leppard, M.S.P.T.

Physician Assistant Studies Preceptor

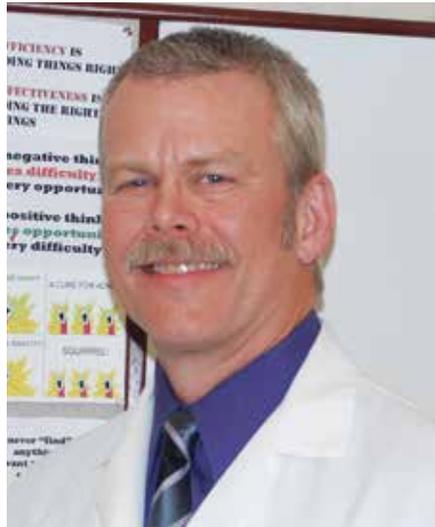
Todd VanHeest, M.D., of Spectrum Health Medical Group — Zeeland Physicians is a veteran preceptor for the Grand Valley physician assistant studies program. Having instructed students in women's health for 14 years, VanHeest enjoys the camaraderie of being involved in educating the new generation of health care providers. "It keeps me sharper and more in tune by allowing me to stay active and keep in touch with new guidelines and recommendations for practice." Students benefit from his clinical expertise both in the office and the hospital settings. "There are just some things that you can't teach in a classroom," he notes. Clinical Coordinator Mandy German, P.A.-C., agrees, "We value the opportunities that Dr. VanHeest provides for our students to apply their knowledge in actual cases."

Students appreciate the scope of Dr. VanHeest's knowledge and his passionate commitment to helping people improve their lives. "I try to make it to as many of my deliveries as I can," he says; in fact, he has managed the births of all five children born to each of three patients over the years. One graduate comments, "I definitely benefited from observing Dr. VanHeest, since he was always very informative and thorough with his patients." A student from our class of 2012 reported, "I learned so much about the treatment of women's health problems."

Dr. VanHeest inspires students to learn by challenging them to do better, to learn more, and to solve problems. Assigned readings help students find and apply those solutions. "Just keep up with the readings, and you will do great," advises a 2013 graduate. "Also, if you don't know an answer to a question, find it, because the question will come up again." A student advises, "Bring snacks because he rarely ever stops to eat lunch or dinner."

In addition to practicing, teaching, and raising a family, Dr. VanHeest is active in the medical community, modeling professionalism by serving on the board of the Michigan State Medical Society, on the Lakeshore Regional Coordinating Council, and on the Maternal Clinical Quality Committee at Zeeland Community Hospital. "People invested in me as I went through school, and I want to do the same for the next generation. This is a way of giving back."

VanHeest enjoys the camaraderie of being involved in educating the new generation of health care providers.



Todd VanHeest, M.D.

Cyrus served in a work group to assist the School of Social Work to gain its initial Council on Social Work Accreditation in the 1980s and has remained involved since.

Social Work Preceptor

Tracy Cyrus, L.M.S.W., has been a dedicated preceptor for the Master's of Social Work program since the mid 1980s, providing an interprofessional experience in a setting that combines health care, social work, child welfare, and criminal justice. As a community member committed to the School of Social Work at Grand Valley, Cyrus served in a work group to assist the School of Social Work to gain its initial Council on Social Work Accreditation in the 1980s and has remained involved since.

Cyrus was hired by the Center for Child Protection at Helen DeVos Children's Hospital more than 22 years ago to establish procedures for serving children and their families both within and outside of the hospital. The Center for Child Protection exists for one purpose: to protect children by establishing standards of care for victims of child abuse and neglect. The center's team is available around the clock to Child Protective Services (CPS) caseworkers, law enforcement, and medical providers throughout the State of Michigan.



Tracy Cyrus, L.M.S.W.

Cyrus is effective in utilizing a model of interprofessional education and is methodical in orienting students to interdisciplinary care. She ensures students are exposed to and interact with each of the medical disciplines present within the Center for Child Protection, having the students understand who they are, their role within the setting, and how each of the roles interacts with the others. Students under Cyrus's supervision also gain an understanding for disciplines with which they coordinate care outside of the hospital (e.g., child welfare, police, court) in the same manner.

In a complex setting tasked with ensuring the protection of children who may be experiencing abuse and/or neglect, Cyrus orients and supervises students systematically. She trains students how to clinically interact with children and families, assists them to learn the larger systems and policies that must be understood in this practice setting, and teaches them how disciplines work together. Cyrus models a social work approach and perspective in an organization oriented to a medical model, assisting the student to understand the value of social work within a medical setting. She also teaches students to educate law enforcement and child welfare workers on the science and medicine that inform their work.

Cyrus says she considers it an honor to contribute to a student's education. She sees work with students as mutually beneficial relationships, as she and the rest of the team benefit and learn from students as well. By engaging with students, she is able to influence the next generation of social workers. Cyrus has also recently begun teaching field education courses as an adjunct Grand Valley faculty member.

Speech-Language Pathology Preceptor

Speech-language pathology (SLP) graduate students in the Communication Sciences and Disorders Department (CSDD) participate in clinical, community-based internship placements with clinical practice preceptors.

Maria 'Veronica' Saenz, M.A., C.C.C.-S.L.P., has been recognized as a professional who not only guides the development of clinical skills as a preceptor, but takes an interest in each student's professional development. Nominated by SLP graduate students, Saenz received a Midwest Interprofessional Practice, Education, and Research Center (MIPERC) preceptor award in her discipline in 2015. Veronica has been a preceptor for SLP students in the rehabilitation services department at the Sanctuary at the Park in Muskegon, MI. "She taught by example,

maintaining a caring and professional manner at all times" said graduate student Chermaine Mariano, "she not only taught me more than I could have anticipated, but also made me feel comfortable in her facility and in treating her caseload of patients."

When asked about her role as a clinical SLP preceptor, Saenz stated, "It's an enjoyable and rewarding journey to facilitate outstanding students through experiences in the real world to help them reach a higher level of competency, independence, and success as clinicians."

"We value the clinical expertise, energy, and time our preceptors dedicate to supporting the development of future speech-language pathologists," said Denise Ludwig, Ph.D., associate professor and director of CSD clinical education.

"It's an enjoyable and rewarding journey to facilitate outstanding students through experiences in 'the real world' to help them reach a higher level of competency, independence, and success as clinicians."

— Maria 'Veronica' Saenz, M.A., C.C.C.-S.L.P.



Maria Veronica Saenz, M.A., C.C.C.-S.L.P.



COMMUNITY PARTNERSHIPS AND SERVICE LEARNING

Developing and nurturing strong partnerships with local and regional health care organizations and other community connections are central to Grand Valley being the leading provider of health sciences professionals in West Michigan. Co-ops, internships, and service learning opportunities are critical to the continued growth of students, health sciences professions, and the entire region.



Clinical Affiliation Model Offers New Perks to Health Care Facilities

Many of Grand Valley's nursing and health professions students are mentored and taught during their clinical experiences by preceptors, largely professionals in hospitals, clinics, and other health care settings, who serve as students' clinical supervisors. Grand Valley's Preceptor Perks Program offers benefits to preceptors such as a gratis faculty appointment, access to Grand Valley's Fieldhouse and library system, community

discounts, and free continuing education. Additionally, health care organizations that partner with Grand Valley to provide student experiential learning opportunities for health-related students now have the opportunity to participate in the Clinical Affiliation Model, a new initiative provided by the Office of the Vice Provost for Health. The Clinical Affiliation Model is a formal partnership wherein Grand Valley provides facility recognition through a guaranteed pipeline to student learners, talent recruitment assistance, and joint media campaigns.

“The Clinical Affiliation Model acknowledges and supports health care organizations that play an important role in students’ clinical assignments.”

**— Jean Nagelkerk,
Vice Provost for Health**

The aMDI is enhancing student learning experiences, engaging faculty in multidisciplinary research and development, and working with our community to bring novel medical devices and protocols to market.

Jean Nagelkerk, vice provost for health, said, “The Clinical Affiliation Model acknowledges and supports health care organizations that play an important role in students’ clinical assignments. The opportunity for students to experience an exceptional clinical learning environment helps shape their disciplinary knowledge and skills that are essential for future career success.”

Holland Hospital was the first facility to participate in the Clinical Affiliation Model. As a partnering facility, a small joint media campaign was carried out during winter semester. Photos taken during the campaign were used within the hospital’s monthly employee newsletter and an internal social media announcement. Grand Valley also used photos throughout its website and publications.

Four Grand Valley students were featured in the Holland Hospital joint media campaign: Arianne Boynton a speech-language pathology graduate student; Allyson Stokosa, an undergraduate nursing major who worked closely with her preceptor, Meggan Hefferan, for 160 hours mostly on the spine/orthopedics floor; and Dani Treffers, a health information management major who worked in the medical records office.

“During my internship I helped with projects related to coding, billing, quality assurance — a wide spectrum,” Treffers said, adding she also shadowed people in Human Resources and Information Technology.

aMDI Institute

The applied Medical Device Institute (aMDI) is a hybrid of the classic university education enterprise and a commercial enterprise that bridges the gap between learning and practice. The aMDI is enhancing student learning experiences, engaging faculty in multidisciplinary research and development, and working with our community to bring novel medical devices and protocols to market. By creating multidisciplinary project teams of faculty members and students from engineering, nursing, health sciences, statistics, communications, regulatory, policy, and business disciplines, aMDI strives to answer two fundamental questions:

- **Can it be done?** This question addresses issues around technical feasibility, materials, sterilization, packaging, manufacturability, and intellectual property issues.
- **Should it be done?** This question addresses business viability aspects, such as, but not limited to, sales and distribution channels, cost and pricing, as well as regulatory issues.

The aMDI was conceptualized within GVSU and explored with the West Michigan community in early 2013. The discussion centered on the needs of the stakeholders, the timing within the health care ecosystem of West Michigan, and the infrastructure required to launch, build, and sustain a nonacademic unit, while meeting the mission and vision of GVSU. In late 2015, aMDI was launched in prototypical form to test the hypothesis that this blend of ideation, concept development, design, early stage prototyping of engineering, and science and business processes into one streamlined experience was feasible, and that research grant funding could support the enterprise.

In less than a year, aMDI is conducting studies addressing timely health care issues that are funded by external small- to medium-sized original equipment manufacturers, health care foundations, the City of Grand Rapids, and the State of Michigan.

- *Surge Cardiovascular* is funding Computational Fluid Dynamics (CFD) modeling of the aortic arch. This work is led by Professor Wael Mokhtar (engineering), employs two graduate students in engineering, and will lead to the design and 3-D rapid prototyping of a device, which is to be tested at aMDI's facilities.
- *Running Form Solutions* is funding the biomechanics comparative analysis of various running forms. "Good Form Running" reduces athlete injury, and increases the efficiency and enjoyment as compared to "Common Form Running." Using the Vicon Vision System and Force-Plate floor, Professors Blake Ashby and Gordie Alderink with a graduate student (Alyssa Schaeffbauer) are conducting this work in the Motion Lab at Grand Valley's Cook-DeVos Center for Health Sciences. Funding for this research is through the State of Michigan's Economic Development Corporation.
- *Spectrum's Heart and Vascular Institute's* foundation is funding the collaboration of Ryan Madder, M.D., (interventional cardiology) and Brent Nowak, Ph.D., (aMDI) to study the impact of wireless remote robotic surgery. The objective of this work is to demonstrate technologies and methods that allow wireless remote cardiac surgery of geographic distances similar to that between Ludington and Grand Rapids. This technology would allow patients to be treated when distance and weather would otherwise prohibit it.
- *OrthoForge* is funding Professor Samhita Rhodes (engineering) to conduct signal analysis and algorithm development of bone healing signals. OrthoForge's patented device allows wound monitoring that is critical to identify patient-specific needs in near real-time and is adapted to each patient's biochemistry, physiology, and disease state. OrthoForge funding is matched by Michigan Economic Development Corporation's Small Company Innovation Program/Technology and Commercialization Assistance funding. The aMDI has executed two Collaborative Research and Development Agreements with the U.S. Army Institute of Surgical Research in the field of hematology and tissue generation.
- The aMDI is working closely with the West Michigan economic development enterprises, The Right Place, MI-Device, MichBio, and the Michigan Small Business and Technology Development Center to build collaborations and constituencies with medical device original equipment manufacturers, contract manufacturers, and engineering firms to develop a comprehensive medical device ecosystem.
- The aMDI is collaborating with Emerge West Michigan/Start Garden, and Grand Valley's Richard M. and Helen DeVos Center for Entrepreneur and Innovation (CEI) to develop student, faculty, and industry pathways to commercialization.

Speech-Language Pathology Students Provide Literacy Training

Speech-language pathology program graduate students and faculty members provided an evening training to parents of preschool children who are at-risk for reading disabilities. The service-learning event was developed by Denise Ludwig, associate professor, and Janine Bartley, assistant professor, of the Communication Sciences and Disorders Department, in collaboration with personnel from the Head Start for Kent County program (HS4KC). This is the third year that the speech-language pathology program has provided training to parents at HS4KC.

The training focused on teaching parents strategies to help their children develop prereading skills, including phonological awareness skills of rhyming, sound-blending, and elision. Phonological awareness is the ability to recognize sounds in words, imitate the structure of sounds, and manipulate the order of sounds. These skills are a strong indicator of long-term reading and spelling success and can predict literacy performance.

Bartley explained, “The ability to blend phonemes supports the skill of decoding words when reading.” Parents and children were provided with opportunities to make-take activities to use at home. Graduate students experienced opportunities to explain the importance of prereading skills and answer questions about how language and speech development are critical to learning how to read. Students and faculty members modelled techniques and activities that parents could use at home during daily activities that would support the development of elements of language that are critical for successful

development of reading skills. Parents and children from multiple Kent County Head Start locations attended the event, which was held in the evening so most family members could attend.

HS4KC Education Program Manager Kari Clark comments, “The parent training promotes our established school readiness goals by teaching activities that support the development of oral language, phonological awareness, and alphabet knowledge.”

According to the American Speech-Language and Hearing Association, prevention of language and literacy disorders and intervention for preliteracy skill development are in the scope of practice for speech-language pathology. Parent training events occur biannually and are part of a first semester clinical education experience for graduate students enrolled in the master of science program in speech-language pathology in the Department of Communication Sciences and Disorders.



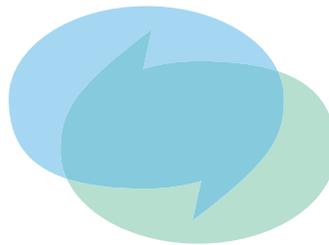
CSD graduate students use activities to teach phonological awareness skills.



Linda Zeller, deputy director for behavioral health and developmental disabilities for the State of Michigan, speaks to the West Michigan Health Forum audience providing a government perspective of integrating physical and mental health.

Public Forum Examines Critical Topics in Health Care

Grand Valley State University, together with the Midwest Interprofessional Education, Practice, and Research Center; Blue Cross Blue Shield of Michigan; Michigan State University – College of Human Medicine; and the Center for Clinical Systems Improvement, has partnered to provide a venue for impartial civic discussions on health topics pertinent to the well-being of the community called the West Michigan Health Forum. Panelists and audience members include health care leaders, practitioners, policy makers, business leaders, and educators, as well as students.



HEALTH FORUM OF WEST MICHIGAN

Each January, the forum coordinates its first meeting of the year with the West Michigan Healthcare Economic Forecast. The forecast is an event coordinated by Grand Valley's Office of the Vice Provost for Health at which a year-

long study conducted by faculty members from the Seidman College of Business is presented to the public. The study is intended to inform health care policy and community decisions about the types of health care professionals, services, and delivery systems that could best serve the West Michigan community. The study also sets the stage for future forum discussions.

Following the January event, the 2016 forum offered panel presentations and discussion on topics that included population health, the evolution of health care, and a two-part series on the integration of physical and mental health care. Future program titles include *Medicare Global Payments*, *Virtual Health and Emerging Technologies*, and *Geriatrics: Aging in Home, Continuum of Care, and Long-term Care*.

The forums are free and open to community members. Grand Valley's Office of the Vice Provost for Health hosts the forum downtown on the Robert C. Pew Grand Rapids Campus on the first Friday of each month throughout the fall and winter semesters from 7:30-9:30 a.m. To learn more about upcoming forums or to register to attend, please visit www.gvsu.edu/miperc/. For additional information about the organization, please contact Katie Branch at branchka@gvsu.edu or (616) 331.5811.

Public Health Spring Break in Atlanta

While many students used their spring breaks for rest and relaxation, some students chose to pursue an educational option instead. Eight students from the public health program were selected for a chance of a lifetime opportunity to tour the Centers for Disease Control and Prevention (CDC) in Atlanta, GA, during spring break 2016.

The week consisted of two full days of meeting with CDC experts from areas across public health fields including epidemiology, food outbreak, women and children's health, vaccinations, and communications. The highlight of the CDC tours was the Emergency Operations Center, where the group saw emergency responses for four national and international events, including the Flint Water Crisis. For faculty members Ranelle Brew and Karen Niemchick this was a chance to pipeline their students into the nation's leading public health employer.

"To be given the chance to tour our students in Atlanta was a dream come true for us, as well as for them," said Brew. "Everyone we met at the CDC had incredible energy and excitement for public health that reignited my own spirit and passion." said Gert Wallis, '17 M.P.H. candidate.

“Public health needs the next generation of leaders, and those in graduate programs like Grand Valley’s are crucial for building expertise. It was a pleasure to host them here at CDC,” said Diana Yassanye. Yassanye works on the Partnerships Team in the Office of the Director; Office of Policy, Planning, and Evaluation; and Office of Public Health Preparedness and Response (PHPR) at CDC.

Additional activities in Atlanta included a tour to the Jimmy Carter Center, time with

the Task Force for Global Health, and a Service-learning Day in partnership with Emory University’s Rollins School of Public Health. “It was a great opportunity to partner with students from Emory University, while working on a beautification project at the Center for Pan Asian Community Services. I was able to learn about their M.P.H. program, share experiences, and make future connections, while serving the Atlanta community with my peers,” said Kasie Pickart, ’16 M.P.H. candidate.

The highlight of the CDC tours was the Emergency Operations Center, where the group saw emergency responses for four national and international events, including the Flint Water Crisis.



Students from the Master’s of Public Health program were fortunate to make the Center for Disease Control one of their key stops on their Atlanta trip over spring break.

In the past two years, HGI has collected and redistributed more than 18 tons, or more than 50,000 servings, of fresh produce.

Heartside Gleaning Initiative Increases Access to Healthy Food

Food insecurity is associated with lower dietary quality, including a lower consumption of fruits and vegetables. Poor diet quality with limited fresh fruit and vegetable intake has been shown to increase the incidence of many chronic diseases, including type 2 diabetes, hypertension, cardiovascular disease, obesity, and some cancers. In predominantly lower-income and minority neighborhoods, there is typically less access to fresh fruits and

vegetables and greater access to unhealthy food. The Heartside neighborhood of Grand Rapids, MI, with high rates of homelessness, poverty (51 percent), and food insecurity, exemplifies these characteristics. The U.S. Food and Drug Administration (FDA) designated the neighborhood as a low-income, low-access food desert.

Heartside Gleaning Initiative (HGI) empowers Heartside and surrounding communities to become healthier through increased access to healthy foods and nutrition education. HGI collects excess



Grand Valley students take part in gleaning efforts at the Fulton Street market.

produce from Fulton Street Farmers Market (40 farmers donate produce) and transports it to the Heartside neighborhood for distribution to individuals, food pantries, and free and low-cost meal programs. In the past two years, HGI has collected and redistributed more than 18 tons, or more than 50,000 servings, of fresh produce.

HGI Director, Lisa Sisson, a registered dietitian nutritionist and assistant professor of hospitality and tourism management (HTM) at Grand Valley, formed the initiative in 2014. Sisson says, "A core value of HGI is education of the entire community, students, donors, and food recipients." Students, faculty members, and staff members from across the Grand Valley community are involved with HGI, from interns in the School of Public and Nonprofit Health Administration and the Department of Public Health, to the Wicked Issues of Sustainability course in the liberal studies program. HTM students have been engaged in a number of ways, including volunteering with gleaning and developing and implementing fund-raising events. One HTM student reflected, "While volunteering, I learned the importance of helping others. Building a healthy community takes a lot of work and the help of others, and generosity of not only time, but skill and services."

The Fulton Street Farmers Market, Degage Ministries, God's Kitchen, and Mel Trotter Ministries are just a few of HGI's partner community organizations. HGI recently won \$5,000 in the GVSU 5 x 5 competition. The prize will be used toward the purchase of a cargo van to increase HGI's capacity, contributing to a greater impact on the health of the Grand Rapids community.

MIPERC Service-learning Health Expo

To ensure that tomorrow's health care professionals are prepared for and empowered to make future practice integration changes, health care students must not only understand the benefits of interprofessional practice, but also be well-versed in working within an interprofessional framework prior to graduation (World Health Organization, 1988). The Midwest Interprofessional Practice, Education, and Research Center (MIPERC) is committed to educating health professionals by providing experiences in the development of collaboration, communication, and teamwork skills that support patient-centered, quality care. One such example of this commitment is the MIPERC service-learning workgroup's annual, multi-institutional, interprofessional health expo, in which health-related professions students participate in interprofessional service-learning experiences.

The third annual Health Expo, held on March 22, 2016, involved 169 students and 31 faculty members from five colleges, with representation from more than 17 different health professions. Participating students were assigned to interprofessional teams based on the expo's theme: The Eight Dimensions of Student Wellness. Each team had seven weeks, with the guidance of a faculty advisor, to create a team poster exhibit to be shared publicly at the Expo.

The following anonymous feedback was received from several students who participated in the interprofessional team exhibit:

The third annual Health Expo, held on March 22, 2016, involved 169 students and 31 faculty members from five colleges, with representation from more than 17 different health professions.

“I think it was the most positive group project experience of my entire college career. Each student was motivated to show how our topic could benefit potential patients or clients and did so effectively. Since each student in my group was driven to be a health care professional, it was nice to see that no one ‘slacked’ or refused to pull their own weight, because becoming a health care professional requires so much discipline. 10/10 would do this again.”

“Participating in the Health Expo was an amazing experience that contributed to my knowledge about other health professions. It

made me go outside the box and learn about many different areas in health care that will impact me greatly in my future career.”

This year, the students had the opportunity to present their exhibit to more than 300 Health Expo visitors. All 30 team exhibits were evaluated by impartial judges and the top five were invited to present at the 2016 MIPERC annual conference in September.

To learn about the upcoming 2017 MIPERC Service-learning Health Expo, visit www.gvsu.edu/MIPERC or contact Katie Branch at branchka@gvsu.edu or (616) 331-5811.



Thirty student teams developed poster presentations based on the Health Expo's theme: The Eight Dimensions of Student Wellness.



Dr. Yasmin Hurd provides the audience with the national perspective on the current marijuana laws as she addresses the ethical issues at the DeVos Medical Ethics Colloquy.

Colloquy speakers agreed that more research is necessary to determine the long-term effects of marijuana and its validity as a miracle drug.

DeVos Medical Ethics Colloquy Expands Viewing Options

Individuals are now able to view the DeVos Medical Ethics Colloquy events via live webcast. The first of such webcasts took place in March 2016 for the presentation “Is America Going to Pot?” According to Vice Provost for Health Jean Nagelkerk, Ph.D., FNAP, the colloquy brings together members of our community to examine critical ethical aspects of important medical issues. Offering webcasts will help to share these important discussions with a broader audience.

The colloquy is held twice a year in a format that brings together two national experts to share their perspectives on a selected topic and to examine the related ethical considerations. Kevin Hill, M.D., M.H.S., director of the substance abuse consultation service at McClean Hospital in Belmont, MA, and Yasmin Hurd, M.D., Ward-Coleman chair of translational neuroscience and director of the Center for Addictive Disorders at Mount Sinai Behavioral Health system in New York, NY, addressed the March topic on the legalization of marijuana..

Hurd laid out the science of marijuana and addressed health care practitioners’ challenges

related to marijuana’s addictive impact, including influences on the developing brain and psychiatric risks. Hill discussed the development of policy related to marijuana, including decriminalization, legalization of recreational marijuana, and medical marijuana. He emphasized the need to examine the evidence of various conditions to mitigate the risks of marijuana use, as policy is developed.

Both speakers agreed that more research is necessary to determine the long-term effects of marijuana and its validity as a miracle drug.

The addition of the webcast gives Grand Valley the opportunity to offer faculty members an opportunity to include these discussions in their classes. The student organization Promoting Interprofessional Education for Students (PIPES) presented the webcast to a group of approximately 70 students at one of their March meetings. The speakers were able to meet briefly with the student group prior to the event.

The DeVos Medical Ethics Colloquy is held at Grand Valley’s Center for Health Science and is funded in part by a generous gift from the Richard and Helen DeVos family. Colloquy events can also be viewed at a later date on the colloquy website. Information is available at www.gvsu.edu/colloquy/.

“This new clinical opportunity is meeting an enormous need in educating our students, because neurological placements for students are limited in the community.”

— Dan Vaughn,
Director of
Physical Therapy



Grand Valley physical therapy Professor Barb Baker and a student clinician assist patient Derrica Desgranges at the rehabilitation center.

Rehabilitation Center Partnership

Grand Valley State University's Department of Physical Therapy has entered into an exciting and unique community partnership with Calvin College's speech department and Western Michigan University's occupational therapy department. Grand Valley professor Barbara Baker, P.T., Ph.D., N.C.S., currently evaluates and treats patients and supervises students, as needed, at the Calvin College Rehabilitation Services (CCRS) facility.

CCRS primarily serves clients of all ages and with any type of disorder ranging from sprained ankles to strokes. Because of the interdisciplinary composition of the clinic staff, it is especially well suited to treat clients who have neurological disorders, such as cerebral palsy, stroke, head injury, and multiple sclerosis. Clients with neurological disorders often require the services of all three disciplines: speech therapy, occupational

therapy, and physical therapy (PT). Uniquely, this clinic provides PT students opportunities to experience treatment of neurological clients from intercollegiate and interdisciplinary perspectives. Working with experienced faculty members, the students observe various treatments and perform supervised hands-on treatment. Dan Vaughn, director of the Grand Valley's, Department of Physical Therapy states, “This new clinical opportunity is meeting an enormous need in educating our students, because neurological placements for students are limited in the community. It is also meeting a need in the community by servicing the underserved population in Grand Rapids.”

Clients can use insurance to pay for treatment at CCRS. If insurance funds have run out and clients are in need of assistance, CCRS has a hardship policy in place, which assists clients who cannot pay. For more information about the program, contact Barbara Baker at bakerb@gvsu.edu.

Aging Conference Engages Community

On March 19, 2016, more than 300 persons, including presenters and volunteers, attended and participated in the 19 sessions offered at an annual conference focused on the theme Resilience: The Bright Side of Aging held at Grand Valley's Richard M. DeVos Center.

Keynote speaker, Karl Pillemer, Ph.D., gave a compelling presentation, "Advice for Living from the Oldest and Wisest Americans", drawn from his research at Cornell University and Weill Cornell Medical College. A copy of his newest book, *30 Lessons for Loving: Advice from the Wisest American on Love, Relationships, and Marriage*, was given to each attendee.

The closing session was a panel of local dementia experts, including Iris Boettcher, M.D., geriatrician, and former Mayor George Heartwell. Each panel member represented a sector of the community, including health care, business, local government, faith community, and professional service



Keynote speaker Karl Pillemer from Cornell University addresses the audience at the 2016 Aging Conference.

providers. Dementia Friendly Grand Rapids (DFGR) invited all conference participants to provide their ideas about ways that different community sectors could become more dementia-friendly and commit to becoming Dementia Friends or Dementia Champions themselves, with training offered by DFGR. The organization is part of a national initiative, Dementia Friendly America, that creates communities dedicated to dementia-friendly practices, coordination across sectors, and respect for the dignity and input of persons with dementia and their caregivers.

Also present were representatives from AARP[®] Michigan and the Grand Rapids Community Foundation Encore Project. Professionals were able to earn continuing education units for participation — these included social work, nursing, occupational therapy, therapeutic recreation, and nursing home administrators. Undergraduate and graduate students presented research posters on aging topics as well. This annual event is so well regarded by professionals and older adults in the community that more than 27 sponsors helped fund the event. Mercy Health was the sole diamond-level sponsor, emerald-level sponsors included Beacon Hill at Eastgate and AARP MI. The major sponsors displayed exhibits in the Hager-Lubbers Exhibition Hall for conference attendees.

The conference was fully enrolled in less than 12 days after registration opened. As a result, the planning committee, comprised of faculty and staff members from Grand Valley and community partner agencies, will consider alternative venues to accommodate the growing interest. The 2017 Aging Conference is scheduled for February.

The MIPERC conference drew more than 200 health care practitioners, administrators, and educators from more than 40 organizations in the Midwest region.

2015 Midwest Interprofessional Practice, Education, and Research Conference

In an environment offering a variety of networking and collaboration opportunities, the eighth annual Midwest Interprofessional Practice, Education, and Research Center (MIPERC) conference drew more than 200 health care practitioners, administrators, and educators from more than 40 organizations in the Midwest region and provided a platform for researchers to present and discuss their findings.

Highlighting the two-day event at Grand Valley's Richard M. DeVos Center, speakers at the forefront of the national discussion on interprofessional practice, education, and/or research presented on topics related to the theme: Strategies for the Application of Successful Models and Practices. Speakers included Michael Faas, M.A., F.A.C.H.E., CEO of Metro Health Corporation in Grand Rapids; Lesley Bainbridge, Ph.D., M.Ed., B.S.R (P.T.), director of interprofessional education in the faculty of medicine and associate principal in the College of Health Disciplines at the University of British Columbia in Vancouver, Canada; Dr. Darrell G. Kirch, president and CEO of the Association of American Medical Colleges in Denver, Colorado; and Amy Blue, Ph.D., associate dean for educational affairs and

associate vice president for interprofessional education in the College of Public Health and Health Professions at the University of Florida.

Barbara Brandt, Ph.D., associate vice president for education and director of the National Center for Interprofessional Practice and Education at the University of Minnesota, presented a preconference workshop, including updates on the National Center's activities and current resources and tools.

MIPERC supports student participation in the conference and offers admission at no charge to those who are interested. During the 2015 conference, keynote speaker Lesley Bainbridge met with a group of 60 first-year physical therapy students and engaged in a Q & A session with the group. In addition, students from Grand Valley's physician assistant studies program attended the conference with their professors.

This year also marked the first year of the MIPERC Preceptor Awards, an opportunity for faculty members and students to honor a health care professional who has shown exemplary service as a preceptor. Award winners included preceptors Tracy Cyrus (social work), Ellen Heit (nursing), Maria Veronica Saenz (communications science and disorders), Corey Schaedig (physician assistant studies), Lillian Scholl (medical laboratory science), and Christine Wallis (physical therapy).



Podium presenters wrap up their presentation at the end of a MIPERC conference breakout session.

MIPERC Expands Membership

The Midwest Interprofessional Practice, Education, and Research Center (MIPERC) has received national recognition from the National Center for Interprofessional Practice and Education as a demonstration model of interprofessional education and collaborative practice for both infrastructure and scholarly activities. This recognition has stimulated educational institutions from across the Midwest to join MIPERC in expanding and realizing its mission.

In 2007, the MIPERC was founded by Grand Valley State University, Michigan State University-College of Human Medicine, and Grand Rapids Medical Partners. In addition to the founding members, MIPERC's institutional membership has since grown to include Ferris State University College of Pharmacy, Michigan College of Optometry, Wayne State University, the Michigan Area Health Education Center (AHEC), Grand Rapids Community College, Kent Intermediate School District, Indiana Wesleyan University, Creighton University, Oakland University, Saginaw Valley University, the University of Michigan, Central Michigan University, the University of Southern Indiana, the University of Evansville, the Southwest Indiana Area Health Education Center (AHEC), Ivy Tech Community College, and the University of Wisconsin-Madison. The MIPERC is housed at Grand Valley State University. Grand Valley's location, depth of health professions programs, and the surrounding community's commitment to health care and life sciences have provided a fertile incubator for leading and coordinating interprofessional initiatives.

The MIPERC mission is to identify ways in which partners can infuse interprofessional initiatives across disciplines, learning institutions, and health care systems. Various aspects of this work and related research have been generously funded by Blue Cross Blue Shield of Michigan, the National Center for Practice and Education, the Michigan Department of Health and Human Services, the U.S. Department of Defense, and the U.S. Health Resources & Human Services Administration. Through grant funding, MIPERC has been able to test the outcomes associated with interprofessional practice and education projects. Research study results have demonstrated statistically significant changes in knowledge gains using the MIPERC Interprofessional Collaborative Practice education modules, positive shifts in perceptual biases, positive safety outcomes, and changes in selected clinical indicators.

As a result of MIPERC's success in implanting and strengthening interprofessional initiatives across the Midwest, the MIPERC chair, Jean Nagelkerk, vice provost of health at Grand Valley State University, has been appointed by the national center to lead the conversations for replicating and implementing MIPERC's model in other regions to move interprofessional education and collaborative practice forward.

For more information, visit the MIPERC website at www.gvsu.edu/miperc or email Brenda Pawl, director of interprofessional initiatives at pawl@b@gvsu.edu.

Jean Nagelkerk, vice provost of health at Grand Valley State University, has been appointed by the National Center for Interprofessional Practice and Education to lead the conversations for replicating and implementing MIPERC's model.



RESEARCH AND GRANTS

True to our commitment to scholarship and student/faculty research, Grand Valley continues to receive a significant number of research grants related to the health sciences. The following pages are just a few examples of the research and scholarship taking place at Grand Valley that make the university such an important resource for scholastic achievement.



Improving Daily Activity for Patients with Heart Failure

According to Associate Professor of physical therapy Michael Shoemaker, P.T., D.P.T., Ph.D., G.C.S., we don't yet know how to consistently and significantly improve daily activity in individuals with heart failure. The current exercise training program to break the cycle of inactivity and deconditioning has been ineffective, especially in the long term. However, psychosocial-based interventions, including health coaching and daily activity feedback, appear to be promising but are understudied.

Therefore, Shoemaker teamed up with Spectrum Health advanced heart failure cardiologist Dr. Michael Dickinson, M.D., F.A.C.C., and Priority Health Wellness Coach Amy Kowalk, M.A., C.H.E.S., and the team received a \$40,000 grant from Medtronic's Cardiac Rhythm Disease Management External Research Program. This team is studying patients with heart failure who also have Medtronic implantable cardioverter defibrillators and biventricular pacemakers (GVSU IRB#14-180-H). These Medtronic devices have internal accelerometers that record and store daily activity over long periods of time, providing a unique

The World Health Organization recognizes typhoid fever as a global health problem, with an estimated 21 million cases and 200,000–600,000 deaths annually.

opportunity to study trends in daily activity. The study, entitled Exercise- and Psychosocial-based Interventions to Improve Daily Activity in Heart Failure, involves randomized assignment of eligible patients to either a control group or to a health coaching/home exercise group receiving weekly home visits from a health coach and a physical therapist for three months. In addition, a feedback group was provided weekly feedback and encouragement using a FitBit for three months.

Study results are expected to provide greater insights into ways in which clinicians can help patients improve health status by increasing daily activity and to generate additional questions for future research.

Typhoid Fever Research in African Children

Grand Valley State University Distinguished Associate Professor of Molecular Genomics Sok Kean Khoo, Ph.D., from the Department of Cell and Molecular Biology of the College of Liberal Arts and Sciences, received a grant subaward from the National Institute of Allergy and Infectious Diseases under National Institutes of Health. The research project is titled Global Genomic and

Proteomic Profiling of African Children with Typhoid Fever and involves collaborators from the University of Nebraska Medical Center, the University of Colorado Anschutz Medical Campus, and the University of California Irvine.

Typhoid fever is caused by a bacterium called *Salmonella enterica serovar Typhi*. The World Health Organization recognizes typhoid fever as a global health problem, with an estimated 21 million cases and 200,000–600,000 deaths annually. In Africa and South Asia, young children represent a subgroup with the highest disease burden. The clinical diagnosis of typhoid fever is often unreliable and confused with other febrile illnesses. Definitive diagnosis, through blood or bone marrow culture, is labor intensive and expensive, with sensitivity of 40-70 percent. Developing less costly and more efficient diagnostic tools for typhoid fever is critical. This project focuses on acquiring global gene expression and proteomic profiles and identifying classifier genes and proteins in African children with typhoid fever to better understand their host response. Findings will lead to long-term goals of developing better diagnostic tools and vaccines for typhoid fever to improve the public health, especially of African children.



Sok Kean Kho, Ph.D., distinguished associate professor of molecular genomics, Department of Cell and Molecular Biology, works with her graduate assistants in one of the many labs at Grand Valley's Cook-DeVos Center for Health Sciences.

Testing an Interprofessional Collaborative Practice Model to Improve Obesity-related Health Outcomes with a Statewide Consortium

During the summer of 2012, the Michigan Department of Community Health (now Michigan Department of Health and Human Services) approached Grand Valley to take the lead on a proposal designed to implement an interprofessional collaborative practice model in Michigan and to expand and create practice environments, comprised of nursing and other health professional disciplines, engaged in interprofessional collaborative practice. The proposal was funded and Grand Valley provided the project lead using the Midwest Interprofessional Practice, Education, and Research Center (MIPERC) collaborative practice program comprised of online learning modules, daily huddles, case study presentations, and community projects as the study intervention. The study was implemented at two nurse-managed centers, Grand Valley State University Kirkhof College of Nursing Family Health Center, and Wayne State University Campus Health Center.

The study provided intervention training to 14 clinicians consisting of nurse practitioners (n = 8), physicians (n = 22), social workers (n = 3), and dietitians (n = 2). Between sites 59 students participated in the interprofessional collaborative practice training including baccalaureate nursing (n = 30), nurse practitioner (n = 12), social work (n = 11), dietetics (n = 4), and movement science (n = 4).

The interprofessional and collaborative practice training modules demonstrated knowledge gains showing statistically significant changes, as well as self-reported survey perceptions showing decreases in biases toward other professions.

The clinical setting, program-specific content was delivered over three months with patients recording their food and activity measurements, setting and evaluating patient-centered goals, and collecting selected clinical indicators. Weight loss interventions were delivered to 290 patient participants and showed statistically significant weight loss in program completers ($p < .001$). Other clinical outcomes showed no changes ($p > .05$).

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UD7HP25052 for Testing an Interprofessional Collaborative Practice Model to Improve Obesity-related Health Outcomes with a Statewide Consortium for grant amount of \$1.47 million awarded to Michigan Department of Health and Human Services.

Cherry Street Interprofessional Health Care and Education Study Update

The Office of the Vice Provost for Health and Cherry Health, Michigan's largest federally qualified health center, received support for a second year of an interprofessional practice and education study from the National Center for Interprofessional Practice and Education at the University of Minnesota, Twin Cities Campus, and the Michigan Department of Health and Human Services. Cherry Street Health Center, located on the southeast side of Grand Rapids, is staffed by 26 health care workers from six disciplines, all of whom have been trained using online education modules to enhance their ability to provide patient-centered care as part of an interprofessional team.

In addition to staff health care workers, 26 students have been training as part of an interprofessional education experience. Students represent six disciplines including medical, medical assistant, nursing, pharmacy, physician assistant, and social work from Ferris State University, Grand Rapids Community College,

Grand Valley State University, and Michigan State University College of Human Medicine.

Students and staff members participate in daily huddles and collaborative care planning that contribute to interprofessional experiences. Focus groups with clinic staff and students indicated the interprofessional activities have resulted in improved communication and teamwork and increased efficiencies, such as number of patients seen per shift per staff provider. Interprofessional collaborative practice (IPCP) interventions and evaluation of outcomes will continue into a second project year.

To assess effects of the IPCP interventions on patient outcomes, 250 adult diabetics were enrolled in the study, and data about diabetic clinical indicators were measured at project start and year end, including hemoglobin HgbA1c levels, BMI (body mass index), BP, and others. After one year, patients improved their HgbA1c and blood glucose levels; however, BMIs remained essentially unchanged. With support of the Cherry Street Health Center staff, the second project year will continue to collect patient data and focus on interventions offering clinical and peer support to motivate patients about healthy lifestyle choices.



Medical staff from Cherry Street Health Center worked with students from Grand Valley, Ferris State, and Michigan State universities to complete an interprofessional education experience and research project.

Core Muscle Activation Device

Sometimes research ideas evolve from the ideas of others. In 2013, a local fitness trainer and entrepreneur contacted Steve Glass, Ph.D., F.A.C.S.M., in Grand Valley's exercise science program, to perform testing of an exercise device he was developing. Called a "slosh tube," the device is a water-filled tube that can be used like a weight-lifting barbell. The exception is that the water moving inside the tube creates instability and forces postural support muscles to contract in order to maintain balance. Glass conducted three research studies on the device using electromyography to examine muscle activation patterns during different types of lifting movements.

Along with almost 30 student researchers from the exercise science program, more than 60 subjects were tested using the device. The first study, which examined core muscle (abdominal and paraspinal) and arm (bicep and deltoid) activation during unstable arm curls, found that the destabilizing nature of the tube forced paraspinal muscles to compensate continuously in order to maintain control. This compensatory muscle activation of the back muscles may be a valuable tool for the treatment of patients with low back pain, who often lose the ability to quickly activate paraspinal muscles. The paper has been accepted for publication in the *Journal of Strength Conditioning Research*.

Medicare Managed Care Spillovers and Treatment Intensity

Economics Professor Kevin Callison, Ph.D., conducts research in health economics-related topics. His current research has been accepted for publication in *Health Economics*.

The desire to leverage competitive market forces led to the inclusion of private health

insurance plans alongside traditional fee-for-service (FFS) Medicare as coverage options for seniors. Although historical enrollment trends in the privately administered Medicare Advantage (MA) programs have been unstable, participation rates have doubled since 1999. As of 2013, nearly one in three Medicare enrollees obtained their insurance benefits through an MA plan. While the cost effectiveness of the MA program as a whole is a topic of debate, several studies have concluded that increased MA enrollment affects the treatment costs of FFS patients. Evidence suggests that these "spillover effects" from the MA program lead to reductions in the costs associated with FFS Medicare treatment, however the mechanisms underlying these cost savings are not well understood.

To address this shortcoming, Callison's research augmented the typical cost spillover analysis with an examination of the impact of increased enrollment in MA on the utilization of care, treatment intensity, and the health outcomes of FFS beneficiaries hospitalized with a diagnosis of acute myocardial infarction (AMI). This expanded analysis is among the first to expound on the mechanisms responsible for the observed MA cost spillovers and to provide evidence linking the cost reductions associated with MA spillovers to reduced treatment intensity in the FFS population.

Using data on hospital admissions from five states, study results indicated that increases in MA penetration led to reduced treatment intensity for FFS AMI patients through reductions in the average number of inpatient procedures, surgical treatments to restore blood flow to the heart, and indicators for particularly intensive inpatient interventions. Additionally, these reductions in utilization and treatment intensity were associated with a small, but statistically significant, increase in inpatient mortality for FFS AMI patients.

This expanded analysis is among the first to expound on the mechanisms responsible for the observed Medicare Advantage cost spillovers and to provide evidence linking the cost reductions associated with MA spillovers to reduced treatment intensity in the FFS population.

Emergency Room Volume Forecasting

Raymond Higbea, Ph.D., assistant professor, School of Public, Nonprofit and Health Administration, and Grand Valley alumnus Jeff Skinner, M.H.A., are investigating the combined use of two real-time emergency department volume predictors to test a technique of predicting arrivals two hours into the future. The results of this project have been promising and, when implemented, allow emergency department managers the ability to readjust staffing and space resources to anticipated volume, thus reducing or eliminating wait times. This project, *Forecasting the Potential for Emergency Department Overcrowding*, was presented at the International Conference on Health Information Technology Assessment in October 2015 and received the best interprofessional paper award at the conference.

Phase two of the project is currently under way with the assistance of Grand Valley computer science students who are developing a product that will enable charge nurses to enter two numbers on their cell phones to retrieve a predicted census two hours into the future. Finally, phase three of the project will involve testing of the tool throughout Spectrum Health emergency departments.

Effectiveness of Cooling Following Hyperthermia

Ross Sherman, Ph.D., associate professor, Movement Science Department, is investigating the use and effectiveness of active cooling following whole body hyperthermia. To date, two research studies have been completed examining the use of commercially available cooling towels placed separately around the neck, and when used as a full head-and-neck wrap in comparison to arm and hand cooling in an ice water bath. Outcome measures were time to cool, thermophysiological function (i.e., deep core temperature, skin temperature, and heart rate), perceptual thermal sensation, and simple cognitive motor skills (e.g., reaction time, word color association).

Both of these studies found that cooling towels were ineffective with regard to time to cool and reducing core temperature and heart rate — you may as well rest in the shade — and that simple motor skill tasks are not negatively impacted by hyperthermia. These findings help guide health professionals in selecting the best treatment(s) for individuals exposed to extreme heat, especially athletes performing during preseason and/or summer months. Future studies will investigate the role of combined dehydration and active cooling, as well as testing the effectiveness of an ice-filled neck cooling device.

Research Grant – Impacting Muscle Soreness and Recovery

A grant was awarded to Ross Sherman, Ph.D., associate professor in the Grand Valley's Movement Science Department, by the International Society of Sports Nutrition and MusclePharm, Inc. for a grant entitled, *Effectiveness of Branched-chain Amino Acids and Taurine to Reduce Muscle Soreness and Improve Recovery Following Eccentric Exercise.*

The purpose of the study is to investigate the effectiveness of immediate pre-exercise ingestion of a branched-chain amino acid and taurine supplement on exercise-induced muscle damage (EIMD), perceived soreness, and sport-specific performance following a bout of eccentric lower limb exercise.

As more and more people either reinvest in physical activity or undertake new high-intensity physical challenges, understanding how to help them recover and continue with those pursuits becomes vital. Interestingly, the use of supplements before, during, and after exercise has become almost second nature in society even though empirical support for their use may be limited. Previous research has shown that a seven-day, pre-exercise supplementation period can help reduce the deleterious effects of either unaccustomed or eccentric exercise on EIMD and perceived soreness. But there has been very limited work examining the effectiveness of a single pre-exercise ingestion, which is more representative of what someone returning to working out/training or increasing their training load would do beforehand.



ALUMNI HIGHLIGHTS

Grand Valley alumnae have topped the 102,000 mark, making the task of choosing a handful of them who are making an impact in the health sciences professions a nearly impossible challenge. The stories that follow represent the kinds of careers and lives to which all of our graduates aspire. From the very first graduate to our most recent, we're proud of the difference our alumni are making in the health sciences.



**Mary Kay VanDriel, '02,
President, Spectrum Health
— Big Rapids and Reed City
Hospitals, Big Rapids, MI**

One doesn't have to look too deeply into some of West Michigan's most innovative and successful health-related programs to find the name Mary Kay VanDriel.

Though she is settled in now as president of Spectrum Health — Big Rapids and Reed City hospitals, VanDriel's resume shows she has participated in some of West Michigan's biggest health care projects and programs.

"I like building programs," said VanDriel, who earned a Master's of Science in nursing (M.S.N.) from Grand Valley State University in 2002. "It's kind of been my career."

Some of the projects in which she has been involved are the DeVos Children's Hospital in Grand Rapids, the Spectrum Health Healthier Communities program, and the Bonnie Wesorick Center for Health Care Transformation at Grand Valley. Since 2007, VanDriel also has served as president of Value Health Partners in Grand Rapids, an organization consisting of eight Michigan-based health care systems coordinating to improve community health.

As president of the two hospitals, VanDriel continues to create programs that serve people. One of the favorite parts of her job is the opportunity "to listen to people and understand where needs are and where we can match those needs with what we can offer, and, if we don't offer it, to be able to build a program (that meets the need)."



Mary Kay VanDriel, '02

Though she is settled in now as president of Spectrum Health — Big Rapids and Reed City Hospitals, VanDriel's resume shows she has participated in some of West Michigan's biggest health care projects and programs.

Her involvement with DeVos Children's Hospital happened while she was working for what was then Butterworth Hospital in Grand Rapids. "I was working in adult critical care and then took a management job that was then a peds (pediatric) service," she said. "When I got there, there was an idea that maybe we could be a children's hospital, so I spent the next 10 to 11 years working with local pediatricians to develop a vision to build a children's hospital." VanDriel was director of the hospital until 1998.

Besides her M.S.N. from Grand Valley, VanDriel has a bachelor's degree in nursing from the University of Michigan, a master's degree in management from Aquinas College, and a doctorate in education leadership from Western Michigan University. While she was finishing her master's in management and her doctorate, VanDriel was given the charge of developing a community health program, which is today known as

Spectrum Health Healthier Communities program. The program allocates \$6 million every year to provide programs and services for underserved residents of West Michigan. In 2015, the program's services connected Spectrum more than 620,000 times with community members.

VanDriel speaks highly of her experiences at Grand Valley and remains committed to and connected with the school. "The rigor of the education has helped me focus on measurement and scholarly work," she said. "I also did some teaching for Grand Valley. At the time I had done a lot of public speaking, but I learned so much more from lecturing to a class of 63 students. The preparation and delivery of a lecture helped me to package information to keep students engaged in discussion over two hours. I transferred this learning into my work today by preparing and delivering information for discussion with audience participants.

In Reed City and Big Rapids, VanDriel is the face of the hospital in the community. "You have to be able to deliver messages that are meaningful for people," she said. "That was the value of a master's of nursing from Grand Valley, that holistic focus of nursing. You learn quickly about what's of interest to your audience and about their needs. Many people need help learning how to navigate the health care system and its language, learning what a diagnosis means, and where they get treatment." She finds satisfaction in being able to explain the services her hospitals provide and connecting people to the care they need.

VanDriel also is supportive of the next generation of leaders, as well as Grand Valley. She recently started a women's leadership group at Grand Rapids' West Catholic High School, her alma mater. Twenty high school juniors and seniors meet regularly to learn from current leaders in careers how to get to that point. "I want to have them think about their careers and open their scope to

different options," she said. Recently, 12 of those students joined her in Big Rapids to meet with employees from different departments and explore careers available at the hospital. "We talked about our education and its value. I talked about Grand Valley, where I received my M.S.N.," she said. "I'm just trying to expose young high school students to what a career could look like and the resources available at Grand Valley to make that possible."

Mina Breuker, '90, President and CEO, Holland Home, Grand Rapids, MI

It may have taken Mina Breuker, president and CEO of Holland Home, 10 years to earn her Bachelor of Science degree in nursing (B.S.N.) from Grand Valley State University, but there was nothing lazy about that decade. As a registered nurse at Holland Hospital in 1980, Breuker loved nursing practice but had a bigger vision for the future. "I spent those first years learning critical care," she said. "As I looked forward, I realized that, in order to advance my career, I needed to obtain my bachelor's in nursing. Grand Valley gave the best options for a working person."

She went back to school, completing a full 120 credit-hour degree. "It was a pretty intense time of either being in class, studying, or working," she remembers. "But it paid off because it provided me with not only the education and letters behind my name but also the experiences. My eyes were opened to new opportunities." Those opportunities were already becoming realities by the time she graduated in 1990. She had advanced at Holland Hospital to director of emergency services and, with even greater leadership aspirations, went directly from Grand Valley to Aquinas College, where she earned her Master of Management degree in 1995.



Mina Breuker, '90

“It was a pretty intense time of either being in class, studying, or working,” she remembers. “But it paid off because it provided me with not only the education and letters behind my name but also the experiences.”

She continued to advance at Holland Hospital, rising to the position of corporate director for ambulatory, diagnostic, and therapeutic services in 1995. By 1998, Breuker had been at Holland Hospital for 20 years. “I loved it,” she said. “I had great opportunities because it was a small community hospital. Then I started looking at what the future was going to be with the baby boomers coming and thought that the long-term care industry would be where the action is. I said, ‘you know what, I want to know I can be successful somewhere else.’ Holland Hospital was like home. I grew up there. I thought if I want to make a change, I need to do it now.” People said, “If you want to work in post acute and long-term care, you need to check out Holland Home.”

Breuker connected with Holland Home’s CEO and soon took the job of executive director at their Fulton Manor Campus. “I was good in acute care, but I knew little about long-term care and the intense regulations,” she said. “My first two years were the highest, steepest, learning curve I think a person could have. It was a lot of work, but it was awesome.” Holland Home provides care for more than 1,600 residents and touches more than 4,000 lives in the community daily through its hospice, home care, rehabilitation, private-duty nursing, Medicaid waiver, senior millage, and Care Resources PACE (Program of All-inclusive Care of the Elderly) programs. She continued to progress through Holland Home management, becoming COO in 2009, president in 2014, and ultimately, president and CEO in 2015.

Breuker prides herself on bringing people together and keeping patients, clients, and residents at the center of everything Holland Home does. “The future of health care is collaboration and partnering,” she said. For example, Breuker participates in a group of area long-term care providers that shares best practices. Breuker calls it “Co-opetition — we cooperate with our competitors.” The group understands that cooperating and learning from each other provides better care and service to the community. “By working together and changing practice and policy, we can make a huge impact on the community,” she said. “There is more than enough work to go around.”

Looking forward, Breuker would like to reignite a passion for international missions that has taken her to Ecuador, Kenya, and South Africa. But for now, she’s dedicated to being the best president and CEO of Holland Home that she can be. “My plate’s pretty full here at Holland Home,” she said. “My mission is right here.”

Christopher Weis, Ph.D., '81, Toxicology Liaison, National Institute of Environmental Health Sciences



Christopher Weis, Ph.D., '81

After earning his bachelor’s degree in biology, Weis spent two years as a surveyor building a road in Swaziland, Africa, before coming back to the states and earning dual doctoral degrees in physiology and toxicology from Michigan State University.

Christopher Weis, Ph.D., '81, is toxicology liaison/senior advisor, Office of the Director, National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health, Washington, D.C.

Before there was a Grand Valley State University, there was Grand Valley State Colleges (GVSC), a cluster of four distinctly different colleges. GVSC’s most novel arm, Thomas Jefferson College (TJC), drew Christopher Weis

to campus in the mid-1970s. “I came to Grand Valley because of my attraction to the experimental education that was going on at Thomas Jefferson College,” he said. “Without that college and without that unstructured learning that TJC provided me and many others, I would never have gone to college.” That would have been a terrible waste of talent considering Weis is currently senior advisor to the program director of the National Institute of Environmental Health Science’s (NIEHS) National Toxicology Program, in Washington, D.C. “TJC was an opportunity that really launched and furthered my interest in life sciences that I could never have gotten at a traditional school.”

After earning his bachelor’s degree in biology, Weis spent two years as a surveyor building a road in Swaziland, Africa, (a job he’d also done during summers at TJC), before coming back to the states and earning dual doctoral degrees in physiology and toxicology from Michigan State University.

Prior to joining the NIEHS in 2010, Weis served as senior toxicologist at the U.S. Environmental Protection Agency, National Enforcement Investigations Center (NEIC) in Denver, CO. While there, he worked in criminal forensics and established a laboratory for trace analysis of bimolecular evidence. “We were very involved in characterizations in threats and risks during the anthrax terrorist incident in the U.S. Senate in 2001,” he said. “I led a team that was basically airlifted to those disasters and characterized the threat using whatever science needed to be done. ... bringing science to the scene of disasters with experienced, multidisciplinary scientists and using science to characterize the nature of the disaster in the best way to protect human and environmental health during the disaster.” Besides the anthrax incident, Weis worked on the World

Trade Center attack and an asbestos disaster in the mining town of Libby, MT, for which his team is highlighted in the book *An Air That Kills* by Andrew Schneider and David McCumber.

Today, his work in policy is less dramatic but equally important. “We help set policy, we do a lot of work with the WHO, and we’re doing lots of work on global health,” he said. “As the climate changes, we’re doing lots of work on the social and environmental disruption associated with the warming of the climate and global health. We work to set policy for how environmental science is measured and the benchmarks that are used to protect human health in this nation, and we also coordinate worldwide with the European Union and our colleagues Southeast Asia.” He was elected last year as vice president of the American Board of Toxicology.

More than 35 years after earning his degree, Weis still looks back fondly on Grand Valley State Colleges. “TJC give me the confidence and curiosity to pursue my dreams and my interest,” he said. “What I learned there is if you follow your heart and you’re persistent, you can do anything you want to do. I will forever be grateful to the university and the faculty that supported me for that reason.”

Weis’ love of Grand Valley is equaled by his love of his current job. “The NIH is kind of like Disneyworld for life scientists,” he said. “There is so much progress and so many incredibly interesting things going on in medicine and life science now and this is the focal point for that progress. The NIH is just an amazing place to be.”

Chris Matzke, '00, Chief Operating Officer, Sunset Retirement Communities, Jenison, MI

Christina Matzke came to Grand Valley as a freshman in 1996 because she loved the campus and the school’s academic reputation. “I’d been on campus quite a few times for events, and I always liked the feel of it and the area,” she said. It wasn’t until after orientation that she made a decision on a degree path.

“I knew I wanted to go into a profession that was helping people, something in the health sciences,” she said, “but I wasn’t exactly sure what that was.



Chris Matzke, '00

Matzke oversees the day-to-day operations of all of Sunset’s campuses, which includes two independent living campuses, three assisted living campuses, two skilled nursing campuses, a homecare service, and relationships with a variety of community services and a hospice.

I remember sitting in my dorm room flipping through all the degrees and majors and came across therapeutic recreation.” Though she had never heard of the program, the description in the catalog was enough to arouse her interest, and she contacted and met with the program director. “We talked through what the degree was about,” she said. “Then we talked about the kind of jobs you could get coming out of school and I loved it. It provided me with so many different opportunities and choices.”

Matzke has made the most of those opportunities and choices, parlaying her 2000 B.S. in therapeutic recreation/recreational therapy into a career that has led to her current role as chief operating officer for Sunset Retirement Communities. Matzke oversees the day-to-day operations of all of Sunset’s campuses, which includes two independent living campuses, three assisted living campuses, two skilled nursing campuses, a homecare service, and relationships with a variety of community services and a hospice. She manages a staff of about 750 that serve more than 700 residents.

She has been at Sunset in a variety of capacities since 2003. After graduation, the native of the east side of Michigan moved back to that area to take a job as senior adult programmer for the city of Farmington Hills. She developed exercise and wellness programs for senior adults in the community for two years before a desire to do more impactful work brought her to Sunset.

“I missed the clinical side of things,” she said. “I missed helping people in need.” There was another contributing factor in her decision as well: “I missed the west side of the state,” she said. “I really enjoyed my time here.”

Whether it’s the geographic area or her happiness in her job, Matzke hasn’t looked back. “Sunset is an amazing

place,” she said. “They really have helped me and a lot of people within the organization grow. They help you achieve your goals and foster a lot of your ideas to keep you moving up.”

Her education at Grand Valley has also helped her maintain momentum. “The program taught me how to care for people in a way that puts the people first and allows me to make that the forefront of business,” she said, noting that Sunset shares a similar mission and values.

Matzke remains connected to Grand Valley, including teaching as an adjunct faculty member in 2004-2005 and currently serving on the Therapeutic Recreation Advisory Board. She also counts on Grand Valley as a talent pipeline. “We take a ton of students from Grand Valley because I just love that relationship and being able to give those students the same experience that I had there and to be able to start out their careers in the same way that I did,” she said.

Matzke knows students will encounter a different industry than the one she encountered at the turn of the millennium. And she’s happy with that. “Health care right now is changing and requires innovative ideas,” she said. “It’s exciting and scary at the same time. I get excited about change opportunities, and trying out new ideas.

Kathleen Vogelsang, '95 and '99, Director/Chief Investment Officer, Van Andel Institute, Grand Rapids, MI

Kathleen Vogelsang, M.B.A., C.F.A., qualifies as a nontraditional student — having received both her bachelor’s of business administration (1995) and master’s of business administration (1999) degrees from Grand Valley State



Kathleen Vogelsang, '95 and '99

“It’s humbling to realize the numbers on our financial statements translate to support for scientists researching cancer and Parkinson’s disease.”

University’s Seidman College of Business, while raising her family and working full-time. She has made an equally nontraditional career choice as a dual-degreed, investment-focused, Chartered Financial Analyst (CFA).

As chief investment officer at the Van Andel Institute in Grand Rapids, Vogelsang plans and directs the institute’s \$1 billion endowment including the development and implementation of investment policies and strategies. She largely established the Van Andel Institute Investment Office herself after joining the internationally regarded biomedical research and science education organization in 2005.

Vogelsang recognizes that medical research is not the most common sector for a person of her credentials and professional background. “There are many different career paths you can take in investments, and they’re all fascinating in their own ways,” she said. “You can work at a bank, an investment firm,

or perhaps a corporation. Or you can go the nonprofit route, which is what I've done at Van Andel Institute. It's humbling to realize the numbers on our financial statements translate to support for scientists researching cancer and Parkinson's disease."

She recognizes the value of her Grand Valley degrees in making her current professional choice a reality. "My Grand Valley education was a tremendous help," she said. "The foundation in investments and finance that I received at Grand Valley helped me so much with the CFA exam because it was so difficult and you really needed the foundation I received at Grand Valley."

Passing the CFA exam marked a turning point for Vogelsang. "It really is when my career started to take off because my employers recognized the value of the CFA," she said. "I credit Grand Valley with giving me that foundation."

Vogelsang also gives Grand Valley her time, having served as president of the Seidman College of Business Alumni Association and in her current role on the Seidman Dean's Advisory Board. She also works on the investment committee for the university's endowment, mentors students, speaks in classes, and has started a scholarship for nontraditional students entering business school. "The joke is I've never left Grand Valley," she said.

She may laugh about her busy schedule, but Vogelsang is sincere about the significance of her work at the Van Andel Institute. "My work is especially meaningful because it's part of a greater goal than simply trying to make money, she said. "I'm not a cancer researcher, but in my own way, I'm contributing to the search for a cure."

Adam London R.S., '04, Health Officer, Kent County Health Department, Grand Rapids, MI

As the county's highest ranking public official, Adam London, who earned his Master of Public Administration degree from Grand Valley in 2004, recognizes prevention as the best approach to community health. The Affordable Care Act and health sciences emphasize the importance of prevention," he said. "As we look at what is making us sick and killing us these days — the leading causes of death are heart disease and cancer and other chronic illnesses — I think we've all learned that it's incredibly expensive to try to manage those illnesses without also investing in prevention. I think there's a bright future for public health, as we all recognize the role of prevention in managing those illnesses." Just as incidents of typhoid, cholera, and tuberculosis were reduced as a result of public health practices, London hopes today's killers will eventually be conquered same way. "We're working in the public health discipline to try to find good prevention messages and strategies to deal with chronic illnesses."

In his role as health officer (he is also a registered sanitarian), some of London's duties include monitoring and overseeing drinking water quality; waste water disposal; the sanitation and safety of daycare facilities, swimming pools, and campgrounds; food safety; and the development of site condos and subdivisions to make sure they had proper water and waste water accommodations.

London's career has been on an upward trajectory ever since earning his bachelor's in environmental health from Ferris State University in 1998. He worked in Kent County as a sanitarian from 2001–2004, and spent his evenings at Grand Valley earning his



Adam London R.S., '04

"The M.P.A. was absolutely critical to my advancement," London said. "The curriculum focus on management, leadership, public finance, human resources, and leadership theory all has been tremendously useful to me over the course of the last 10 to 12 years."

M.P.A. London then went to Ottawa County as a supervisor/director from 2004–2010. London feels the M.P.A. was instrumental in helping him compete for the management job in Ottawa County. He returned to work at Kent County in 2010.

He spent six years in administration and environmental health at the Ottawa County Health Department. Grand Valley was an easy choice for the Big Rapids native. "It wasn't possible for me to take classes anywhere else or any other way than in the evening so that worked well," he said. "Choosing Grand Valley really was a combination of the quality of the university and the accessibility of the program itself."

London knew the program's curriculum and the resulting professional credentials would empower him to advance in the field of public health. In 2010, he took the position of director of environmental health at the Kent County Department of Health and, in 2013, was named health officer there. "The M.P.A. was absolutely critical to my advancement," London said. "The curriculum focus on management, leadership, public finance, human resources, and leadership theory all has been tremendously useful to me over the course of the last 10 to 12 years."

London has become a vocal fan of Grand Valley's M.P.A. program. "I have recommended the program on a number of occasions," he said, "so I've found that tremendously rewarding. I really do treasure my education at Grand Valley and I know that others do so also."

He has also been able to stay connected to the university professionally. "There is a lot of partnership between the Kent County Health Department and Grand Valley," he said, "including our academic health department initiative, where we've created really rigorous health practicum experiences for students at Grand Valley and other area universities, trying to align them with preceptors and with projects that will advance their studies. It's a win-win for the university, for the health department, and for the students."

**Brittan Masters,
'08, '09, '11, 1/182d Field
Artillery (FAR) Battalion
Physician Assistant,
Michigan Army National
Guard; Physician Assistant,
Institute for Athletic
Medicine, Auburn Hills, MI**

After graduating from Grand Valley State University with bachelors degrees in

athletic training ('08) and health sciences ('09), Masters returned for a master's degree in physician assistant studies (M.P.A.S.), finishing in 2011. "The M.P.A.S. seemed like it would be a great fit for my personality," he said. "Since I attended Grand Valley during undergrad, I was very familiar with the area and loved everything it had to offer."

"During my time in the M.P.A.S. program, I commissioned as a second lieutenant with the Michigan Army National Guard," he said. He attended monthly drills and yearly annual training sessions, which helped him develop as an Army physician assistant (PA).

"Following graduation, I moved to the east side of Michigan to join the Institute for Athletic Medicine, where I was the lone PA working for two busy orthopedic surgeons," he said. Currently, he is deployed to the United Arab Emirates and Jordan as an Army Battalion PA responsible for the health of more than 300 soldiers. The job is decidedly different than his work at home. "As a PA working in orthopedics for a private practice, I had to be able to work in multiple hospitals, ambulatory surgery centers, as well as our main office," he said. "As a military PA for an entire battalion, I had to learn the medical standards soldiers must meet to stay within the military." The Army medical administration is constantly changing, which makes it very exciting."

Masters credits Grand Valley for much of his success. "The M.P.A.S. program did a great job helping me succeed," he said. "Aside from the book knowledge, the faculty members provided insight on the profession and guidance on a personal level to help me achieve my goals. Their influence on me has made me the person and professional that I am today."

Brittan isn't planning to lose his professional balance any time soon. After his current deployment, he likely will transfer to a Medical Command detachment, where he can be involved in deployment processing and medical administration. "As a civilian provider, I plan to continue to hone my orthopedic skills and take the Certificate of Added Qualifications (CAQ) for orthopedics in the future," he added.

"GVSU is a great university. There is no question that my time on the west side of the state has made me the person and professional that I am today." His greatest impact is serving his country: "It is truly rewarding to ensure the wellness of those troops who have signed on the line to commit a piece of their life to defending our fine country," he said. "There is no better feeling than that."



Brittan Masters, '08, '09, '11

"It is truly rewarding to ensure the wellness of those troops who have signed on the line to commit a piece of their life to defending our fine country."



2016 PUBLICATIONS, PRESENTATIONS, AWARDS, AND FACULTY ACHIEVEMENTS

The following pages list the publications, presentations, awards, and faculty member achievements that took place during the 2015-2016 academic year. The depth and breadth of the work being done by Grand Valley faculty members in the health professions continues to be impressive and worthy of recognition and celebration.

Publications: Peer-reviewed Journal Articles

- Adamopoulos, J. (2015) Interpersonal exchange and freedom for resource acquisition. *Behavioral and Brain Sciences*, 36(5), 16-17.
- Aldrich, N. J., Brooks, P. J., Yuksel-Sokmen, P. Ozlem, Ragir, S., Flory, M. J., Lennon, E. M., Karmel, B. Z., & Gardner, J. M. (2015). Infant twins' social interactions with caregivers and same-age siblings. *Infant Behavior and Development*, 41, 127-141. doi: 10.1016/j.infbeh.2015.08.005
- Arias-Martorell, J., Tallman, M. C., Potau, J. M., Bello-Hellegourach, G., & Perez-Perez, A. (2015). Shape analysis of the primate proximal humerus: Correlates for suspensory behaviors. *American Journal of Primatology*, 77, 1-19. doi: 10.1002/ajp.22306
- Baxter, M. A., & Jones, B. D. (2015). Two component regulators control hilA expression by controlling fimZ and hilE expression within *Salmonella enterica* serovar Typhimurium. *Infection and Immunity*, 83(3), 978-985.
- Chen, J., Huang, D., Rubera, I., Kuniyoshi, F., Wang, P., Zickert, P., Khoo, S. K., Dykema, K., Zhao, P., Petillo, D., Cao, B., Zhang, Z., Si, S., Schoen, S., Yang, X. J., Zhou, M., Xiao, G. Q., Wu, G., Notdenskjold, M., Tauc, M., Williams, B. O., Furge, K. A., & Teh, B. T. (2015). Disruption of tubular Flcn expression as a mouse model for renal tumor induction. *Kidney International*, 88(5), 1057-1069.
- Cornelius, T., Bell, K. M., Wyngarden, N., & Shorey, R. C. (2015). What happens after I hit? A qualitative analysis of the consequences of dating violence. *Violence and Victims*, 30, 393-416.
- Dean, K., & Fles, E. (in press). The effects of independent and interdependent self-construal on reactions to transgressions: Distinguishing between guilt and shame. *Self & Identity*.
- Deaner, R. O. (2015). The sex difference in performance depth reflects a sex difference in competitiveness. *Journal of Applied Physiology*, 118, 1325. doi: 10.1152/jappphysiol.00158.2015
- Deaner, R. O., Balish, S. M., & Lombardo, M. (2015). Sex differences in sports: An evolutionary perspective. *Evolutionary Behavioral Sciences, Advance online publication*. doi: 10.1037/ebs0000049
- DeVries, D., Beck, T., Stacey, B., Winslow, K., & Meines, K. (2015). Music as a therapeutic intervention with autism: A systematic review of the literature. *Therapeutic Recreation Journal*, 49(3), 220-237.
- Dillard, A., & Hisler, G. (2015). Enhancing the effects of a narrative message through experiential information processing: An experimental study. *Psychology and Health*, 30, 803-820.
- Dubose, D., Sean, C., Hatzel, B., Zdziarski, L. A., DelRossi, G., Hall, I., Prasarn, M., Rehtine, G., & Horodyski, M. (2015). Motion created in an unstable cervical spine during the removal of a football helmet: Comparison of techniques. *Athletic Training and Sports Health Care*, 7(6), 1-7.
- Goehring, M., Bergmooser, A. B., Decker, K. J., Mason, N. R., & Kinne, B. (2015). The effectiveness of aquatic therapy following total hip or total knee arthroplasty: A systematic review. *Journal of Aquatic Physical Therapy*, 23(2), 2-12.
- Gossman, C., Linn, D., & Linn, C. L. (in press). Glaucoma-inducing procedure in an in vivo rat model and whole-mount retina preparation. *Journal of Visualized Experiments*.
- Gossman, C. A., John, C., Mark, W. K., Linn, D., & Cindy, L. L. (in press). Neuroprotective strategies in glaucoma. *Current Pharmacological Designs*.
- Grauholm, J., Khoo, S. K., Nickolov, R. Z., Poulsen, J. B., Baekvad-Hansen, M., Hansen, C. S., Hougaard, D. M., & Hollegaard, M. V. (2015). Gene expression profiling of archived dried blood spot samples from the Danish Neonatal Screening Biobank. *Molecular Genetics and Metabolism*, 116(3), 119-124.
- Hassan, N., Bush, J., Foster, A., Andrews, A., Rajasekaran, S., Reischman, D., Alter, D., & Gelfand, S. L. (2015). Complications associated with red blood cell (RBC) transfusions in the very low birth weight (VLBW) infant. *Journal of Pediatrics and Neonatal Care*, 2(3). doi: 10.15406/jpnc.2015.02.00077
- Ikeda, R., Oberoi, S., Wiley, D. F., Woodhouse, C., Tallman, M. C., Tun, W. W., McNeill, C., Miller, A., & Hatcher, D.A. (in press). A novel three-dimensional analysis to evaluate the temporomandibular joint and space. *American Journal of Orthodontics and Dentofacial Orthopedics*.

- Karasinski, C. (2015). Language ability, executive functioning, and behavior in a diverse sample of school-age children. *International Journal of Language & Communication Disorders*, 50, 144-150. doi:10.1111/1460-6984.12104
- Karpen, M., & deHaseth, P. L. (2015). Base flipping in open complex formation at bacterial promoters. *Biomolecules*, 5, 668-678.
- Kenyon, L. K., Birkmeier, M., Anderson, D. K., & Martin, K. (2015). Innovation in pediatric clinical education: Application of the essential competencies. *Pediatric Physical Therapy*, 27, 178-186.
- Kenyon, L. K., Farris, J. P., Brockway, K., Hannum, N., & Proctor, K. (2015). Promoting self-exploration and function through an individualized power mobility training program: A case report. *Pediatric Physical Therapy*, 27, 200-206.
- Kenyon, L. K., Farris, J., Gallagher, C., Hammond, L., Webster, L., & Aldrich, N. J. (in press). Power mobility training for young children with multiple, severe impairments: A case series. *Physical and Occupational Therapy in Pediatrics*.
- Khoo, S. K. (2015). Biofluid-based biomarkers for Parkinson's disease: A new paradigm. *AIMS Medical Science*, 2(4), 371-373.
- Kinne, B. L., Finch, T. J., Macken, A. M., & Smoyer, C. M. (2015). Using the Wii to improve balance in older adults: A systematic review. *Physical & Occupational Therapy in Geriatrics*, 33(4), 363-375.
- Kinne, B. L., & Leafman, J. S. (2015). Effectiveness of the Parnes particle repositioning manoeuvre for posterior canal benign paroxysmal positional vertigo. *The Journal of Laryngology & Otology*, 129(12), 1188-1193.
- Lillie, M. C., Potekhina, I. D., Nikitin, A., & Sokhatsky, M. P. (2015). First evidence for interpersonal violence in Ukraine's Trypillian farming culture: Individual 3 from Verteba Cave, Bilche Zolote, Ukraine. *Oxbow Books*, 1, 54-60.
- Mata, D., Linn, D., & Linn, C. L. (2015). Retinal ganglion cell neuroprotection induced by activation of alpha7 nicotinic acetylcholine receptors. *Neuropharmacology*, 99, 337-346. doi: 10.1016/j.neuropharm.2015.07.036
- Martínez-Traverso, G. B., & Pearl, C. A. (2015). Immunolocalization of G protein-coupled estrogen receptor in the rat epididymis. *Reproductive biology and endocrinology: RB&E*, 13, 48. doi: 10.1186/s12958-015-0042-z
- Mitchell, J. M., Clasman, J. R., June, C. M., Kaitany, K.-C. C., LaFleur, J. R., Taracila, M. A., Klinger, N. V., Bonomo, R. A., Wymore, T., Szarecka, A., Powers, R., & Leonard, D. (2015). Structural basis of activity against aztreonam and extended spectrum cephalosporins for two carbapenem-hydrolyzing class D β -lactamases from *Acinetobacter baumannii*. *Biochemistry*, 54(10), 1976-87. doi: 10.1021/bi501547k
- Ortiz, E. G., Shorey, R. C., & Cornelius, T. (2015). An examination of emotion regulation and alcohol use as a risk factors for female perpetrated dating violence. *Violence and Victims*, 30, 417-431.
- Shinde, S., Mukhopadhyay, S., Mohsen, G., & Khoo, S. K. (2015). Biofluid-based microRNA biomarkers for Parkinson's disease: An overview and update. *AIMS Medical Science*, 2(1), 15-25.
- Shoemaker, M. J., DeVest, M., Booth, A., & Meny, L. (2015). A virtual patient interprofessional activity to improve interprofessional competencies: A randomized trial. *Journal of Interprofessional Care*, 29(4), 395-397.
- Stickler, L., Hoogenboom, B., & Smith, L. (2015). The female athlete triad: What every physical therapist should know. *International Journal of Sports Physical Therapy*, 10(4), 563-571.
- Stumbo, N. J., Wilder, A., Zahl, M., DeVries, D. Pegg, S., Greenwood, J., & Ross, J. E. (2015). Community integration: Showcasing the evidence for therapeutic recreation services. *Therapeutic Recreation Journal*, 49(1), 35-60.
- Tallman, M. C. (2015). Phenetic and functional analyses of the distal ulna of *Australopithecus afarensis* and *Australopithecus africanus*. *Anatomical Record*, 238, 195-211.
- Tallman, M. C., & Cooke, S. B. (in press). New endemic platyrrhine humerus from Haiti and the evolution of the Greater Antillean platyrrhines. *Journal of Human Evolution*.
- Tiwari, K., Kipp, B., & Sylvester, F. (in press). Modifications of coronary vascular reactivity due to a non-enzymatic reaction between vitamin C and imidazole. *FASEB J*.
- Van Gelder, L. H., Hoogenboom, B. J., Alonzo, B., Briggs, D., & Hatzel, B. (2015). EMG and sagittal plane kinematics of the two-handed and single-handed Kettle Bell Swing. *International Journal of Sports Physical Therapy*, 10(6), 811-826.

Vanden Bosch, M. L., Robbins, L. B., & Anderson, K. (2015). Correlates of physical activity in middle-aged women with and without diabetes. *Western Journal of Nursing Research/Sage/ Impact Factor 1.217, 37(12)*, 1581-1603. doi: 10.1177/0193945914541333

Zondervan, D., Secoli, R., Darling, A., Farris, J., Furumasu, J., & Reinkensmeyer, D. (in press). Design and evaluation of the Kinect-Wheelchair Interface Controlled (KWIC) Smart Wheelchair for pediatric powered mobility training. *Assistive Technology/Taylor & Francis*.

Publications: Books, Chapters in Books

DeVries, D. (2015). Cerebral palsy. In H. Porter (Ed.), *Recreational therapy for specific diagnoses and conditions* (pp. 85-101). Enumclaw, WA: Idyll Arbor, Inc.

Ellis, J., & Tidman, M. (2016). Cryptogenic organizing pneumonia. *Clinical Advisor* 64-73.

Kenyon, L. K. (2015). Fitness in cerebral palsy. In E. E. Jobst & E. Pelletier (Eds.), *Physical therapy case files: Pediatrics, (147-157)*. New York, NY: McGraw-Hill.

Kenyon, L. K., & Borck, R. (2015). Idiopathic toe walking. In E. E. Jobst & E. Pelletier (Eds.), *Physical therapy case files: Pediatrics* (pp. 119-131). New York, NY: McGraw-Hill.

Kenyon, L. K., & Rosevear, E. R. (2015). Brachial plexus palsy. In E. E. Jobst & E. Pelletier (Eds.), *Physical therapy case files: Pediatrics* (pp. 11-25). New York, NY: McGraw-Hill.

Nizielski, S. (2015). *Nutrition for a Changing World*. New York, NY: Macmillan.

Tusch, G., Tole, O., & Hoinski, M. E. (2015). A model for cross-platform searches in temporal microarray data. In J. H. Holmes, R. Bellazzi, L. Sacchi, & N. Peek (Eds.), *Artificial intelligence in medicine 15th conference on artificial intelligence in medicine, AIME 2015, Pavia, Italy, June 17-20, 2015. Proceedings*. (pp. 153-158). Springer International Publishing.

Presentations

Ashby, B. M., Vlietstra, N., Hickox, L. J., & Alderink, G. J. (2015, August). *Methods for full body inverse dynamics analysis of standing long jump*. Presentation at the 39th Meeting of the American Society of Biomechanics, Columbus, OH.

Bacon-Baguely T., & Reinhold M.I. (2015). *Change in physician assistant students' perception of health care providers*. Presentation at PAEA Education Forum, Arlington, VA.

Bacon-Baguely T., Reinhold M. I., & Booth A. (2015, October). *Expansion of a physician assistant program to address the health care needs of the medically underserved in Northern Michigan*. Poster presentation at Global Health Showcase, Grand Rapids, MI.

Bacon-Baguely T., & Reinhold M.I. (2015, August). *Change in perception of physician assistant students after completion of experiences aimed at providing exposure to a variety of health care providers*. Poster presentation at the 5th European Conference on Interprofessional Practice and Education, Nijmegen, Netherlands.

Baker, B., Casterline, M., Decker, J., & VandenBerg, M. (2015, February). *Sitting balance measures in non-ambulating individuals diagnosed with multiple sclerosis: Existence of a correlation between the Function in Sitting Test and the Smart Equi Test*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.

Baker, B., Kaiser, M., Kay, M., O'Neal, E., & Anderson, K. (2015, October). *Effect of fatigue on balance responses in people with multiple sclerosis and on people with no neurological diagnosis*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.

Baker, B., Robinson, J., Sproat, C., & Wilkins, J. (2015, February). *Incoming and graduate physical therapy students' attitudes toward older adults*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.

Balasubramanian, P., Fishback, P., Bossmeyer, R., Elisevich, K., & Rhodes, S. (2015, October). *Automated classification of ECoG Signals using component analysis and support vector machines*. Presentation at the Biomedical Engineering Society Annual Conference, Tampa, FL.

Bartley, J., Ludwig, D., & Karasinski, C. (2015, November). *An examination of the variables impacting phonological awareness skill development in preschool age children*. Poster presentation at the American Speech-Language-Hearing Association Annual Convention, Denver, CO.

Bartman, C. C. (2015). *Role call: An SP Newsletter*. Presentation at the Association of Standardized Patient Educators meeting, Denver, CO.

- Bartz, S. (2015, July). *Concussion education and heat illness education*. Presentation at sHaPe Camp - Health Professions Camp for Middle/High School Students, Grand Valley State University, Grand Rapids, MI.
- Bartz, S. (2015, March). *Sports safety and injury prevention - Concussions and heat illness*. Presentation at the Michigan Association of Health, Physical Education, Recreation and Dance meeting, Grand Rapids, MI.
- Baxter, M. A., Pickrum, A., Zhou, J., & Wilkinson, S. (2015, April). *Environmental Signaling and biofilm formation in Escherichia coli*. Presentation at a meeting of the American Society for Microbiology, Eastern Michigan University, Ypsilanti, MI.
- Benkert, R., Nagelkerk, J., Pawl, B., Clifton, A., Moore, H., Jakstys, C., Myers, A., & Baer, L. (2015, April). *Effects of interprofessional practice on obesity-related health outcomes*. Paper presentation for Wayne State University, College of Nursing Research Day, Detroit, MI.
- Berlin, S. J., Glass, S. C., & Boone, P. (2015, February). *It's better with a team: an interprofessional approach to weight management for older adults*. Presentation at the Art and Science of Aging conference, Grand Valley State University, Grand Rapids, MI.
- Bouza, A., Swanson, H., Stuut, S., Taracila, M., Romagnoli, C., Caselli, E., Prati, F., Bonomo, R., Powers, R., & Wallar, B. (2015, May). *Structure/function characterization of inhibitors for the Class C β -lactamase, ADC-7*. Presentation at the Joint Great lakes and Central regional meeting, American Chemical Society, Grand Rapids, MI.
- Butler, D. D., Engerson, A. L., & Thomas, D. (2015, April). *Analyzing the role of RFG1 and TUP1 in the interactions between Candida albicans and other microbes*. Presentation at the spring meeting 2015, American Society for Microbiology, Ypsilanti, MI.
- Chapa, D., Jarman, S., & Valdez, G. (2015, October). *Kappa opioid regulation of depressive-like behavior and ethanol self-administration following protracted withdrawal from ethanol*. Presentation at the Society for Neuroscience, Chicago, IL.
- Chartier, J., Beasley, J. A., Mistopoulos, A., Meyers, K., Kenyon, L. K., Ashby, B. M., & Anderson, K. (2015, October). *Determining the grip pressure and preference of cane handle designs*. Presented at the Annual meeting of the American Society of Hand Therapists, Denver, CO.
- Chatchavalvanich, S., & Geenen, D. L. (2015, May). *Early cell-cell coupling impairs transplanted stem cell retention and efficacy in the ischemic cardiomyocyte and murine heart*. Presentation at the Spectrum Health System Research Symposium, Grand Rapids, MI.
- Chen, J. (2015, February). *Aging as a mindset: How we think about age may affect how we age*. Presentation at the annual Art and Science of Aging Conference, Grand Valley State University, Allendale, MI.
- Cole, J., Sommers, E. A., Cleary, I. A., & Thomas, D. (2015, November). *Analyzing the role of a putative phosphatase 2A component in candida albicans*. Presentation at the spring meeting 2015, Michigan Branch of American Society for Microbiology, Ypsilanti, MI.
- Couture, G., Karlik, D., Glass, S. C., & Hatzel, B. (2015). *The effect of foam rolling duration on hamstring range of motion*. *The Open Orthopaedics Journal*, 9, 381-386.
- Coviak, C. P., & Tusch, G. (2015, June). *Leveraging technology-practice platforms to achieve a learning health care system*. Presented at the Kirkhof College of Nursing and Bonnie Wesorick Center for Health Care Transformation, Grand Rapids, MI.
- Darling, K., Lozon, T., & Geenen, D. L. (2015, October). *The effect of accessing health information websites on patients' decisions to seek healthcare*. Presentation at the Michigan Academy of Physician Assistants (MAPA) fall conference,
- Deaner, R. O. (2015, October). *Sex differences in sports: Media portrayals and social policies reflect myths, not reality*. Presentation at the annual conference of the Association for Politics and the Life Sciences, Madison, WI.
- Dillard, A., & Wertheimer, M. (2015, May). *Emotion adaptation recall reduces expectations of pain for colon cancer screening*. Presentation at the Midwestern Psychological Association meeting, Chicago, IL.
- Doyle, D., Huisinigh, N., Durham, S., & Taylor, M. (2015, November). *Comparison of the effects of mouse, chick, and human Noto3, a BHLH transcription factor, on floor plate marker expression in the developing neural tube*. Poster presentation at the Society for Neuroscience, Chicago, IL.
- Dueker, G., Chen, J., Portko, S., Cowling, C., Toman, S., Bishop, M., & Zelinsky, M. (2015). *Gestational age at birth as a predictor of development for late preterm, near-term and full-term Infants*. Presentation at the biennial conference of the Society for Research on Child Development, Seattle, WA.

- Dueker, G., & Cowling, C. (2015). *Exploring longitudinal patterns of stability and change in relative developmental standing from 12-to 60-months*. Presentation at the Society for Research on Child Development biennial conference, Philadelphia, PA.
- Engel, A., Kool, P., Seivers, M., Ozga, K. L., Kenyon, L. K., & Stephenson, P. (2015, October). *DPT students' perceptions of clinical instructor effectiveness*. Presentation at the fall conference of the Michigan Physical Therapy Association, Thompsonville, MI.
- Fisch, A., Smart, R., Schroeder, W., & Patel, O. (2015, February). *Potent suppression of proliferation of carcinoma cells by a novel non-nucleoside reverse transcriptase inhibitor*. Presentation at the American Society for Clinical Oncology, Orlando, FL.
- Gevaart, L., & Hatzel, B. (2015, March). *Determining clinical usefulness of the imPACT in assessing concussion in high school and collegiate athletes: a systematic review*. Presentation at the National Athletic Trainers' annual meeting and clinical symposia, St. Louis, MO.
- Glass, S., Blanchette, T., Karwan, L., Pearson, P., O'Neil, A., Karlik, D. D., & Albert, R. (2015, May). *Core muscle activation during unstable bicep curl using a water-filled training tube*. Presented at the ACSM national meeting, San Diego, CA.
- Glass, M., & Hatzel, B. (2015, March). *Pre-participation electrocardiography as part of the pre-participation physical examination: a systematic review*. Presentation at the Great Lakes Athletic Trainers' Association annual meeting, Wheeling, IL.
- Glass, M., & Hatzel, B. (2015, June). *Pre-participation electrocardiography as part of the pre-participation physical examination: A systematic review*. Presentation at the National Athletic Trainers' annual meeting and clinical symposia, St. Louis, MO.
- Goehring, M., Bergmooser, A. B., Decker, K. J., Mason, N. R., & Kinne, B. (2015, February). *The effectiveness of aquatic therapy following total hip or total knee arthroplasty: A systematic review*. Platform presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Harper, T. M., June, C. M., Powers, R., & Leonard, D. (2015, August). *A triple-substitution clinical variant of OXA-23 carbapenemase from Acinetobacter baumannii shows increased activity toward cephalosporins and aztreonam*. Presentation at the American Chemical Society national meeting, Boston, MA.
- Harro, C. C., Burdis, C., Marquis, A., & Piper, N. (2015, February). *Force platform measures of balance impairment: Reliability and validity in individuals with Parkinson's disease*. Platform presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Harro, C. C., Gorman, S., & Platko, C. (2015, February). *Don't just sit there: Evidence-based sitting balance examination and intervention*. Educational session at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Hickox, L. J., Ashby, B. M., & Alderink, G. J. (2015, October). *Analyzing joint work symmetry in the standing long jump with a 3D full-body model*. Presented at the Fall Annual Meeting of the Biomedical Engineering Society, Tampa, FL.
- Hickox, L. J., Ashby, B. M., & Alderink, G. J. (2015, August). *Validity of the two-dimensional sagittal plane assumption in modeling the standing long jump*. Presentation at the 39th Meeting of the American Society of Biomechanics, Columbus, OH.
- Hickox, L. J., Ashby, B. M., Vlietstra, S., & Alderink, G. J. (2015, August). *Methods for full body inverse dynamics analysis of standing long jump*. Presentation at the 39th Meeting of the American Society of Biomechanics, Columbus, OH.
- Howard, M., Kassis, F., Miller, R., Schmidt, A., Webb, N., & Geenen, D. L. (2015, October). *Evaluation of the use of gastric pH altering medications among Spectrum Health Internal Medicine patients as a risk factor for clostridium difficile infection: A retrospective chart review*. Presentation at the Michigan Academy of Physician Assistants (MAPA) fall conference, Traverse City, MI.
- Howard, C. T., Thomas, D. (2015). *Investigation into the role of Peptidase Apr1p in the opportunistic pathogen Candida albicans*. Presentation at the American Society for Microbiology spring meeting 2015, Ypsilanti, MI.
- Huisingh, N., Martinez, D., Peterson, D., Straight, J., Kaufman, D., Sarala, S., King, E., & Taylor, M. (2015, April). *Nato3 induces the expression of key DA neurons in a regionally and temporally specific manner in the developing CNS*. Poster presentation at the Society for Neuroscience- Michigan Chapter, Mt. Pleasant, MI.
- Huisingh, N., Martinez, D., Straight, J., & Taylor, M. (2015, November). *Nato3 is sufficient to drive Lmx1b expression in the developing neural tube*. Poster presentation at the Society for Neuroscience, Chicago, IL.

- Huizen, D. L. (2015, April). *Evaluating training effectiveness*. Presentation at the Michigan Safety Conference, Lansing, MI.
- Huizen, D. L. (2015, October). *Approaches to safety and health management*. Presentation at the Med 1 - Advisory Committee, Grand Rapids, MI.
- Jaskiewicz, L. J., Sisson, L. G. (2015, November). *Impact of a new local food market on low-income neighborhood availability of fresh fruits and vegetables*. Presentation at the 142nd Annual Meeting and Exposition of the American Public Health Association, Chicago, IL.
- June, C. M., Sugg, K. A., Schroder, E. C., Powers, R., & Leonard, D. (2015, August). *The Structure of OXA-51, the native carbapenemase of Acinetobacter baumannii, reveals insights into gain-of-function clinical variants*. Presentation at the American Chemical Society national meeting, Boston, MA.
- Karasinski, C. (2015, June). *Language ability and science achievement in adolescents*. Poster presented at the Symposium on Research in Child Language Disorders, Madison, WI.
- Karasinski, C. (2015, November). *The relation between language and science in high school students*. Poster Presentation at the American Speech-Language-Hearing Association Annual Convention, Denver, CO.
- Karasinski, C., & Bartley, J. (2015, November). *The impact of interprofessional coursework on graduate SLP students' self-perceptions of interprofessional skills*. Poster Presentation at the American Speech-Language-Hearing Association Annual Convention, Denver, CO.
- Karasinski, C., Ludwig, D., & Bartley, J. (2015, June). *Vocabulary and phonological awareness skills in Head Start preschoolers*. Poster presented at the Symposium on Research in Child Language Disorders, Madison, WI.
- Kenyon, L. K. (2015, March). *EmPOWERment: Power mobility training for individuals with multiple, severe disabilities*. Platform Presentation at the CP Research Consortium of Michigan Biennial Conference, Ann Arbor, MI.
- Kenyon, L. K. (2015, October). *Tools you can use: Enhancing evidence-based practice in cerebral palsy*. Educational Session at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Kenyon, L. K., & Farris, J. P. (2015, June). *Engineering hope: Enhancing quality of life through design education*. Platform presentation at the American Society of Engineering Educators Annual Conference and Exposition, Seattle, WA.
- Kenyon, L. K., & Farris, J. P. (2015, November). *EmPOWERment: Implementing power mobility training interventions with children and adolescents with multiple, severe disabilities*. Educational session at the Section on Pediatrics Annual Conference, Pittsburgh, PA.
- Kenyon, L. K., Farris, J. P., Cain, B., King, E. L., & VandenBerg, A. (2015, February). *Development of a tool to aid clinicians in creating power mobility interventions*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Kenyon, L. K., Farris, J. P., Gallagher, C. A., Hammond, L., Webster, L. M., & Aldrich, N. J. (2015, October). *Power mobility training for young children with multiple, severe impairments: A case series*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Kenyon, L. K., Farris, J. P., Gallagher, C. A., Hammond, L., Webster, L. M., & Aldrich, N. J. (2015, November). *Power mobility training for young children with multiple, severe impairments: A case series*. Poster Presentation at the Section on Pediatrics Annual Conference, Pittsburgh, PA.
- Kenyon, L. K., & Furze, J. (2015, November). *Clinical reasoning tools: Recommendations and resources for clinical instructors, academic faculty, and residency mentors*. Educational session at the Section on Pediatrics Annual Conference, Pittsburgh, PA.
- Kenyon, L. K., & Marek, M. B. (2015). *Development in Pelizaeus-Merzbacher disease during the second year of life: A case report*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Kenyon, L. K., Westman, M., Hefferan, A., McCrary, P., & Baker, B. (2015). *A home-based body weight supported treadmill training program for children with cerebral palsy: A case series*. Poster presentation at the CP Research Consortium of Michigan Biennial Conference, Ann Arbor, MI.
- Khoo, S. K. (2015, November). *Circulating microRNAs as progression biomarkers for Parkinson's Disease*. Presentation at the Parkinson's Disease Therapeutics Conference, The Michael J. Fox Foundation for Parkinson's Research, New York, NY.

- Khoo, S. K., Orey, S., Auinger, P., Kang, U. J., Petillo, D., & Tan, A. C. (2015, October). *MicroRNAs as progression biomarkers for Parkinson's Disease*. Poster presentation at the Society for Neuroscience, Chicago, IL.
- Khoo, S. K., Orey, S., Auinger, P., Kang, U. J., Petillo, D. & Tan A. C. (2015, November). *Circulating microRNAs as progression biomarkers for Parkinson's disease*. Presentation at the annual Parkinson's Disease Therapeutics Conference, New York, NY.
- Khoo, S. K., & Pickut, B. (2015, February). *Early detection and mindfulness interventions: The yin and yang of Parkinson's Disease*. Poster presentation at the 10th annual Art & Science of Aging Conference, Grand Valley State University, Grand Rapids, MI.
- Kinne, B. L. (2015, August). *Alternative treatment option for anterior canal benign paroxysmal positional vertigo*. Poster presentation at the International Conference and Expo on Novel Physiotherapies, Chicago, IL.
- Kinne, B. L., Baker, B. J., & Harro, C. C. (2015, February). *Differential diagnosis of lateral canal benign paroxysmal positional vertigo: A systematic review*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Kinne, B. L., Johnson, K., Patterson, R., & Poirier, A. (2015). *The effectiveness of manual therapy techniques in the treatment of patients with hip osteoarthritis: A systematic review*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting at Indianapolis, IN.
- Kinne, B. L., & Leafman, J. S. (2015, October). *Effectiveness of the Parnes particle repositioning maneuver for posterior canal benign paroxysmal positional vertigo*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Kuiper, K., Rahmani, D., Wiest, E., & Geenen, D. L. (2015, September). *Health literacy: Effective screening tools to improve acute care evaluation*. Presentation at the Michigan Interprofessional, Practice, Education, and Research Center (MIPERC) conference, Grand Rapids, MI.
- Leidig, J. P., Theisen, C., Vogel, N., Scripps, J. A., & Wolffe, G. S. (2015, April). *Modeling Ebola Virus Diffusion in Senegal using mobile phone datasets and agent-based simulation*. Presented at NetMob 2015, Boston, MA.
- Leonard, D. (2015, September). *Carbapenemase evolution: from patients to protein structure*. Presentation at the Department of Chemistry, Bucknell University, Lewisburg, PA.
- Linn, D., Fredrickson, J., Lyons, L. (2015, May). *RGC survival with a selective nicotinic agonist and modulator*. Presentation at the annual meeting of the Association for Research in Vision and Ophthalmology, Denver, CO.
- Linn, D. (2015, March). *Can a patch a day keep the doctor away: Looking at nicotine receptors to treat glaucoma*. Biology Department, Frostburg State University, Frostburg, MD.
- Lombardo, M., & Emiah, S. (2015, October). *Why don't USA-based scientists publish studies on the role of innate variation in athletic performance?* Presentation at the annual meeting of the Association for Politics and the Life Sciences, University of Wisconsin-Madison, Madison, WI.
- Luchtefeld, M., Khoo, S. K., Nickolov, R., Hostetter, G., & Jrebi, N. (2015, May). *Locally released matrix metalloproteinase inhibitor (Doxycycline) does not enhance healing in stapled anastomosis in porcine model*. Poster presentation at American Society of Colon and Rectal Surgeons annual scientific meeting, Boston, MA.
- Ludwig, D., Karasinski, C., Bartley, J., Burke, D., & Byars, R. (2015, May). *Examination of phonological awareness skills in preschoolers: Implications for instruction*. Poster presentation at the Michigan Division for Early Childhood Conference, Mount Pleasant, MI.
- Ludwig, D., Karasinski, C., Bartley, J., Rooy, J., & Truer, M. (2015, April). *Examination of phonological awareness skills in preschoolers: Implications for instruction*. Poster presentation at the Michigan Association for the Education of Young Children Early Childhood Conference, Grand Rapids, MI.
- Lusardi, L., Schroedter, L., Schroder, E., Bria, J., & Linn, D. (2015, May). *Can a drug for Alzheimer's disease be of benefit in glaucoma? Results from ACh release and cell culture experiments*. Presentation at the Michigan Chapter, Society for Neuroscience annual meeting, Central Michigan University, Mt. Pleasant, MI.
- Magirl, A., & Hatzel, B., (2015, March). *Femoroacetabular dislocation with accompanied ligamentum teres and acetabular labral involvement: A case report*. Presentation at the Great Lakes Athletic Trainers' Association annual meeting, Wheeling, IL.
- Matthews, A., & Owen-DeSchryver, J. (2015, November). *Using principles and strategies from applied behavior analysis (ABA) to teach young children with Autism Spectrum Disorder*. Presented at the Early On – Michigan conference, Traverse City, MI.

- Mukhopadhyay, S., Orey, S., Beck, J., Counts, S., & Khoo, S. K. (2015, October). *Assessment of Parkinson's disease-specific microRNAs in Alzheimer's disease*. Poster presentation at the Society for Neuroscience, Chicago, IL.
- Mukhopadhyay, S., Orey, S., Beck, J., Counts, S., & Khoo, S. K. (2015, February). *Assessment of Parkinson's disease-specific microRNAs in Alzheimer's disease*. Poster presentation at the 10th annual Art & Science of Aging Conference, Grand Valley State University, Grand Rapids, MI.
- Muma, K. (2015, June). *Creating reservoirs in manikins for NG and J-tube medication administration. HomeGrown simulation solutions*. Presentation at the annual meeting of the International Nursing Association for Clinical Simulation, Atlanta, GA.
- Myaard, M., Smith, J., Melucci, A., Stumpo, R., & Geenen, D. L. (2015, October). *Emerging healthcare population's perception of the physician assistant*. Presented at the Michigan Academy of Physician Assistants (MAPA) fall conference, Traverse City, MI
- Nnebedum, A., Chen, J., & Aldrich, N. J. (2015, October). *Assessment of maternal mind-mindedness within a child-maltreatment prevention program*. Presentation at the biennial meeting of the Cognitive Development Society, Columbus, Ohio.
- Nagelkerk, J. (2015, May). *Midwest Interprofessional Practice, Education, and Research Center: Model and scholarship*. National broadcast for American Interprofessional Health Collaborative Webinar entitled *Faculty Development: Focusing on Clinical and Community Preceptors*. <https://aihc-us.org/aihc-interprofessional-webinar>.
- Nagelkerk, J. (2015, September). *Interprofessional education & collaborative practice*. Presented at Oakland University Retreat, Rochester, MI.
- Nagelkerk, J. (2015, November). *Interprofessional education & collaborative practice*. Presentation at student orientation and introduction to health careers at Davenport University, Grand Rapids, MI.
- Nagelkerk, J., Benkert, R., Pawl, B., Myers, A., Clifton, A., Fenbert, K., & Berlin, S. (2015, April). *Testing an interprofessional collaborative practice model to improve obesity related health outcomes with a statewide consortium*. Poster presented at the National Academies of Practice Annual forum, Alexandria, VA.
- Nagelkerk, J., & Pawl, B. (2015, April). *Midwest Interprofessional Practice, Education and Research Center Interprofessional Education Student Certificate*. Poster presented at the National Academies of Practice 2015 annual meeting & forum, Alexandria, VA.
- Nagelkerk, J., & Pawl, B. (2015, October). *The Interprofessional Education Student Certificate: Development in action*. Presentation at Collaborating Across Borders V: The Interprofessional Journey: Advancing Integration and Impact, Roanoke, VA.
- Nagelkerk, J., Pawl, B., Thompson, P., Bouthillier, M., & Harro, C. (2015, September). *Midwest Interprofessional Practice, Education and Research Center Interprofessional Education Student Certificate*. Poster presented at the Midwest Interprofessional Practice, Education and Research Center Interprofessional Education annual conference, Grand Rapids, MI.
- Nagelkerk, J., Thompson, M., Bouthillier, M., Tompkins, A., Baer, L., Booth, A., Zeitler, D., Stevens, A., & Trytko, J. (2015, October). *Implementing a collaborative practice program in a Federally Qualified Health Center (FQHC) Family Practice Clinic*. Presentation at Collaborating Across Borders V: The Interprofessional Journey: Advancing Integration and Impact, Roanoke, VA.
- Nagelkerk, J., Thompson, M., Bouthillier, M., Tompkins, A., Booth, A., Baer, L., Zeitler, D., Stevens, A., & Trytko, J. (2015, September). *Improving outcomes in adults with diabetes through an IPCP and education program*. Poster presented at the Midwest Interprofessional Practice, Education and Research Center Interprofessional Education annual conference, Grand Rapids, MI.
- Nagelkerk, J. & Vredevoogd, C. (2015, October). *GVSU Scribe Academy: Insight into the role of the scribe*. Webinar nationally broadcast for Association for Healthcare Documentation Integrity.
- Nochera, C. (2015, November). *Fat substitutes*. Presented at the YMCA, Grandville, MI.
- Nochera, C. (2015, April). *Nutrition in weight control*. Presented at the YMCA, Grandville, MI.
- Nochera, C. (2015, February). *Nutrition in sports*. Presented at the YMCA, Grandville, MI.
- Ocobock, C. J. (2015, March). *Feeding the machine: Caloric intake and output during strenuous backcountry expeditions*. Presentation at the Human Biology Association, St. Louis, MO.
- Ocobock, C. J. (2015, March). *Walking for warmth: A reassessment of Neanderthal locomotor inefficiency*. Presentation at a meeting of the American Association of Physical Anthropologists, St. Louis, MO.

- Ocobock, C. J. (2015, May). *Energy expenditure at the extremes: How we measure it and why we should care*. Presentation at Duke University Department of Anthropology brown bag seminar, Durham, NC.
- Ocobock, C. J. (2015, September). *Enduring the extreme: Behavioral and physiological mechanisms for inhabiting a range of high altitude climates*. Presentation at the Annis Water Resource Institute Seminar Series, Muskegon, MI.
- Ocobock, C. J. (2015, October). *Enduring the extremes: How to not die in the wild*. Presentation at a meeting of the Center for Inquiry – Michigan, Women's City Club, Grand Rapids, MI.
- Orr, S. C., Sherman, R., Abeare, M. L., & Cheung, S. S. (2015, May). *Cognitive and motor skill performance are improved by active cooling following passive hyperthermia*. Presentation at the American College of Sports Medicine meeting, San Diego, CA.
- Owen-DeSchryver, J., & Matthews, A. (2015, November). "I want that!" *Teaching manding to young children with Autism Spectrum Disorder*. Presentation at the Early On – Michigan conference, Traverse City, MI.
- Ozga, K., Engel, A., Kool, P., Sievers, M., Kenyon, L., & Stephenson, P. (2015, October). *DPT students' perceptions of clinical instructor effectiveness*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Peck, J., Carter, K., Schwenk, K., Ullery, L., Kenyon, L., & Shoemaker, M. (2015, February). *Activity and participation in 6-12 year old children with cerebral palsy: A pilot study, year 2*. Poster presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Peck, J., Kreiner, K., Michals, K., Shankle, K., Kenyon, L., & Shoemaker, M. (2015, October). *Activity and participation in 6-12 year old children with cerebral palsy: A pilot study, year 3*. Poster presentation at the Michigan Physical Therapy Association Fall Conference, Thompsonville, MI.
- Petillo, D., Orey, S., Tan, A. C., Forsgren, L., & Khoo, S. K. (2015). *Parkinson's disease-related circulating microRNA biomarkers – a validation study*. *AIMS Medical Science*, 2(1), 7-14.
- Powers, R., Prati, F., Caselli, E., Romagnoli, C., Swanson, H., Bouza, A., Smolen, K., Taracila, M. A., Bonomo, R., & Wallar, B. (2015, September). *Structure-function analysis of R2 substituents in boronic acid inhibitors of Acinetobacter-derived cephalosporinase (ADC-7)*. Presentation at the American Society for Microbiology, San Diego, CA.
- Reinhold M. I., & Bacon-Baguely T. (2015, September). *Perceptions of the Affordable Care Act by nurse practitioners and physician assistants*. Presentation at the Midwest Interprofessional Practice, Education, and Research Center Conference, Grand Rapids, MI.
- Reinhold M. I., & Bacon-Baguely T. (2015, October). *Integrating an evidence-based medicine curriculum into Physician Assistant education: Teaching for today and the future!* Presentation at the Lilly Conference Series on College and University Teaching and Learning, Traverse City, MI.
- Schaefer, B. B., K., Farris, J., Kenyon, L., K., & Nowak, B. (2015, October). *Angel Arms: The development of an exoskeleton arm assisting device*. Presentation at the Annual Meeting of the Biomedical Engineering Society 2015, Tampa, FL.
- Scheid, J., & Blackman, S., (2015). *The effects of nutrient deprivation on growth and development in wild-type vs. transgenic (GMO) soybean plants*, Presentation at the annual meeting of the Michigan Academy of Sciences, Arts and Letters, Alma, MI.
- Schmedding-Bartley, J., & Stronach, S. (June, 2015). *Continuing education practices of speech-language pathologists working in early intervention*. Poster presented at the Symposium on Research in Child Language Disorders, Madison, WI.
- Sherman, R., Abeare, M. L., Orr, S. C., & Cheung, S. S. (2015, May). *Hand and forearm, but not neck cooling, reduces thermophysiological and perceptual strain following passive hyperthermia*. Presentation at American College of Sports Medicine meeting, San Diego, CA.
- Shinde, S., Ripley, A., & Khoo, S. K. (2015, February). *Parkinson's disease and microRNAs*. Poster presentation at the 10th Annual Art & Science of Aging Conference, Grand Valley State University, Grand Rapids, MI.
- Shoemaker, M. J., DeVost, M., Booth, A., & Meny, L. (2015, February). *A virtual patient interprofessional activity to improve interprofessional competencies: A randomized trial*. Platform Presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.
- Shoemaker, M. J., Gaskell, A., Vandebunte, K., Sefton, D., McLeod, J., Karia, D. H., Dickinson, M. G., & Khaghani, A. (2015). *A single center comparison of initial acute care outcomes in bridge-to-transplant patients: The HeartMate II vs. HeartWare*. Platform presentation at the American Physical Therapy Association Combined Sections Meeting, Indianapolis, IN.

- Shorey, R. C., Moore, T. M., McNulty, J. K., Strauss, C. V., Cornelius, T., & Stuart, G. (2015, November). *A temporal examination of the attention-allocation model: proximal angry affect moderates the daily relationship between alcohol and IPV*. Presentation at the Association for Behavioral and Cognitive Therapies meeting, Chicago, IL.
- Shoultz, G. (2015, October). *A Descriptive comparison of birth, death and net migration rates for multi-county regions of Michigan: 2001 -2012*. Presentation at the Southern Demographic Association, San Antonio, TX.
- Shoultz, G. (2015, April). *A descriptive comparison of birth, death and net migration rates for multi-county regions of Michigan: 2001-2012*. Presentation at Association of American Geographers annual meeting, Chicago, IL.
- Sunni, N., & Bossemeyer, R. (2015, May). *Durability of sutures used in partial nephrectomy*. Presented at Spectrum Health Research Symposium, Grand Rapids, MI.
- Szura, A., Porritt, M., O'Connor, A., Harms, A., & Campbell, A. (2015). *School disciplinary patterns by student ethnicity*. Presentation at the Michigan's Integrated Behavior and Learning Support Initiative state conference, Michigan Department of Education, Lansing, MI.
- Schmedding-Bartley, J., Ludwig, D., & Karasinski, C. (2015, November). *An examination of the variables Impacting phonological awareness skill development in preschool-age children*. Poster presented at American Speech-Language-Hearing Association convention, Denver, CO.
- Schmedding-Bartley, J., & Stronach, S. (June, 2015). *Continuing Education Practices of Speech-language Pathologists Working in Early Intervention*. Poster presented at the Symposium on Research in Child Language Disorders, Madison, WI.
- Smolen, K., Swanson, H., Taracila, M., Romagnoli, C., Caselli, E., Prati, F., Bonomo, R., Powers, R., Wallar, B. (2015, May). *Characterizing a novel inhibitor of ADC-7 cephalosporinase from Acinetobacter baumannii*. Presentation at the Joint Great Lakes and Central regional meeting, American Chemical Society, Grand Rapids, MI.
- Swanson, H., Bouza, A., Taracila, M., Romagnoli, C., Caselli, E., Prati, F., Bonomo, R., Powers, R., & Wallar, B. (2015, May). *Structure-based inhibitor studies for the class C -lactamase ADC-7*. Presentation at the Joint Great lakes and Central regional meeting, American Chemical Society, Grand Rapids, MI.
- Szura, A., Porritt, M., O'Connor, A., Harms, A., & Campbell, A. (2015). *School disciplinary patterns by student ethnicity*. Presentation at the Michigan's Integrated Behavior and Learning Support Initiative state conference, Michigan Department of Education, Lansing, MI.
- Tusch, G., Gupta, S., Eslamian, S., Pendyam, R., & Theisen, C. (2015, May). *An interface to search time-oriented functional genomics databases*. Presented at the Great Lakes Bioinformatics Conference GLBIO 2015 of ISCB, Lafayette, IN.
- Tusch, G., Pendyam, R., Eslamian, S., Gupta, S., & Theisen, C. (2015, May). *Finding time-patterns in Temporal Gene Expression data*. Presentation at the Great Lakes Bioinformatics Conference GLBIO 2015 of ISCB, Lafayette, IN.
- Tusch, G., Speedie, S., Boren, S., Johnson, S., Warren, J., & Dixon-Lee, C. (2015, April). *Health informatics programs - CAHIIM accreditation update*. Presentation at the AMIA Academic Forum Conference, Albuquerque, NM.
- Tusch, G., Warren, J., Johnson, S., Boren, S., & Speedie, S. (2015, October). *Competencies for master's programs in health informatics*. AMIA, Online Webinar.
- Tusch, G., Warren, J., Johnson, S., Boren, S., & Speedie, S. (2015, November). *S72: Interactive panel - Health informatics graduate program accreditation: CAHIIM process and standards update*. Presentation at the AMIA 2015 Annual Symposium, San Francisco, CA.
- VanDine, A. Bouza, A., Swanson, H., Taracila, M., Romagnoli, C., Caselli, E., Prati, F., Bonomo, R., Powers, R., & Wallar, B. (2015, May). *Characterizing inhibitory compounds to combat antibiotic resistance in Acinetobacter*. Presentation at the Joint Great Lakes and Central regional meeting American Chemical Society, Grand Rapids, MI.
- Vogel, N., Theisen, C., Leidig, J. P., Scripps, J. A., Graham, D., & Wolffe, G. S. (2015, June). *Mining mobile datasets to enable the fine-grained Stochastic Simulation of Ebola Diffusion*. International Conference on Computational Science (ICCS), Reykjavik, Iceland.
- Wallace, H. (2015, April). *Addressing treatment fear and worry among head and neck cancer patients*. Poster presentation at the American Occupational Therapy Association Annual Conference, Nashville, TN.
- Wallace, H. (2015, April). *The therapeutic value of life review: An adaptation and application of the Kawa Model*. Poster presentation at the American Occupational Therapy Association Annual Conference, Nashville, TN.

Wallar, B. (2015, May). *Biochemical and structural analysis of inhibitors targeting the ADC-7 cephalosporinase of Acinetobacter baumannii*. Presentation at the American Chemical Society, Joint Great lakes and Central regional meeting, Grand Rapids, MI.

Wallar, B., Prati, F., Caselli, E., Romagnoli, C., Swanson, H. C., Bouza, A., VanDine, A., Taracila, M.A., Bonomo, R. A., & Powers, R. (2015, September). *Exploring the structure-activity relationship of a series of boronic acid inhibitors of Acinetobacter-derived cephalosporinase ADC-7*. Presentation at the American Society for Microbiology, San Diego, CA.

Zweifel, N., Kenyon, L. K., Farris, J., Aldrich, N. J., & Rhodes, S. S. (2015, October). *Changes in EEG spectra of children with severe disabilities in response to power mobility training*. Presentation at the 2015 Annual Meeting of the Biomedical Engineering Society, Tampa, FL.

Awards and Honors

In Fall 2015, Amy Matthews, Ph.D., was reappointed to the Governor's Autism Council and re-elected as vice-chair of the council. The Autism Council oversees and implements the Michigan Autism Spectrum Disorder State Plan to address priority needs for individuals with autism spectrum disorder across the lifespan. As part of the council work, Dr. Matthews serves as chair of the early childhood committee, which is focused on developing evidence-based practice guidelines, position papers, and resource materials.

Mary Green was appointed to the American Physical Therapy Association Ethics and Judicial Committee.

Bonni Kinne received the Outstanding Professional Poster award at the Michigan Physical Therapy Association Fall Conference (2015, October).

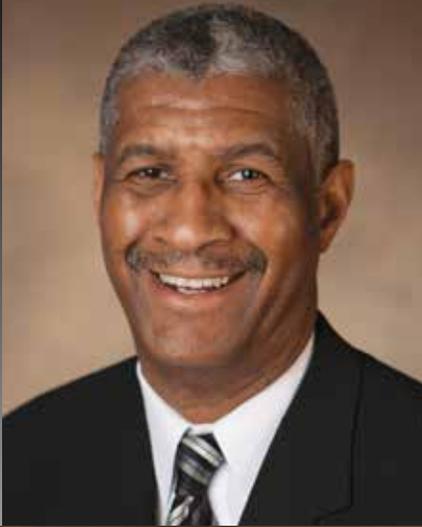
Michael Shoemaker received the Interdisciplinary Health Sciences Outstanding Alumni Award from Western Michigan University (2015, April).

Faculty Achievements and Updates

Meri Goehring received publication recognition at the Spectrum Health Synergy Award Conference (2015, November).

Daniel Vaughn received visiting scholar recognition from the Oakland University Department of Physical Therapy (2015, May).

George Grant, Jr.



Roy Olsson



Frederick Antczak



Cynthia McCurren



Jean Nagelkerk



Diana Lawson



Paul Plotkowski



CONTACT INFORMATION HEALTH AND HEALTH-RELATED PROGRAMS

College of Community and Public Service

<i>Title</i>	<i>Contact person</i>	<i>Email</i>	<i>Phone</i>
Dean of College of Community and Public Service	George Grant, Jr.	grantg@gvsu.edu	(616) 331-6850
Administrative Assistant to the Dean	Katie L. Humphrey	humphka@gvsu.edu	(616) 331-6848
Associate Dean of College of Community and Public Service	Paul Stansbie	stansbp@gvsu.edu	(616) 331-7143
Associate Dean of College of Community and Public Service	Mark Hoffman	hoffmanm@gvsu.edu	(616) 331-6891
Executive Director of the Dorothy A. Johnson Center for Philanthropy	Kyle Caldwell	caldweky@gvsu.edu	(616) 331-9027
Director of School of Social Work	Dianne Green-Smith	greensmd@gvsu.edu	(616) 331-6565
Director of Undergraduate Advising Center (Interim)	Anne London	londonan@gvsu.edu	(616) 331-6890
Director of Criminal Justice	Kathleen Bailey	baileyk@gvsu.edu	(616) 331-7148
Chair of Hospitality and Tourism Management	Michael Sciarini	sciarinm@gvsu.edu	(616) 331-2104
Chair of School of Public, Nonprofit, and Health Administration	Richard Jelier	jelierr@gvsu.edu	(616) 331-6578

College of Health Professions

<i>Title</i>	<i>Contact person</i>	<i>Email</i>	<i>Phone</i>
Dean of College of Health Professions	Roy Olsson	olssonr@gvsu.edu	(616) 331-3356
Administrative Assistant to the Dean	Toni Postema	postemat@gvsu.edu	(616) 331-3358
Chair of Allied Health Sciences	Chad Sutcliffe	sutlifch@gvsu.edu	(616) 331-5526
Chair of Communication and Science Disorders	Dan Halling	halling@gvsu.edu	(616) 331-5604
Director of Speech-Language Pathology	Courtney Karasinski	karasinc@gvsu.edu	(616) 331-5670
Chair of Occupational Therapy	Scott Truskowski	truskows@gvsu.edu	(616) 331-2734
Chair of Physical Therapy	Dan Vaughn	vaughnd@gvsu.edu	(616) 331-2678
Chair of Physician Assistant Studies	Andrew Booth	bootha@gvsu.edu	(616) 331-5991
Chair of Public Health Department and Program	Ranelle Brew	brewr@gvsu.edu	(616) 331-5947
Chair of Diagnostic and Treatment Sciences	Randy Wyble	wybler@gvsu.edu	(616) 331-5642
Director of Diagnostic Medical Sonography Echocardiography	Katelyn Lowman	lowmanka@gvsu.edu	(616) 331-5952
Director of Diagnostic Medical Sonography Vascular	Jennifer VanderPoel	vanderpj@gvsu.edu	(616) 331-5951
Director of Diagnostic Medical Sonography General — Interim	Miriam Teft	teftm@gvsu.edu	(616) 331-5649
Director of Medical Dosimetry	Scott Green	greensc@gvsu.edu	(616) 331-5752
Director of Medical Laboratory Sciences	Jeanne Stoddard	stoddarj@gvsu.edu	(616) 331-3304
Director of Radiation Therapy	LeShell Palmer	palmeles@gvsu.edu	(616) 331-5949
Director of Therapeutic Recreation	Randy Wyble	wybler@gvsu.edu	(616) 331-5642

College of Liberal Arts and Sciences

<i>Title</i>	<i>Contact person</i>	<i>Email</i>	<i>Phone</i>
Dean of College of Liberal Arts and Sciences	Frederick Antczak	antczakf@gvsu.edu	(616) 331-2495
Administrative Assistant to the Dean	Cindy Laug	laugc@gvsu.edu	(616) 331-2495
Associate Dean for Curriculum, Pedagogy, and Academic Opportunity	Kevin Tutt	tuttk@gvsu.edu	(616) 331-2495
Associate Dean for Professional Development and Administration	Shaily Menon	menons@gvsu.edu	(616) 331-2495
Associate Dean for Faculty Resources and Scheduling	Gretchen Galbraith	galbraig@gvsu.edu	(616) 331-3675
Assistant Dean for Finance and Project Management	Michelle McCloud	mccloudm@gvsu.edu	(616) 331-2495
Assistant Dean for Advising and Student Services	Betty Schaner	schanerb@gvsu.edu	(616) 331-2495
Director of CLAS Communication and Advancement	Monica Johnstone	johnstmo@gvsu.edu	(616) 331-2495
Director of the Autism Center (START)	Amy Matthews	matthewa@gvsu.edu	(616) 331-3513
Director of School of Communications	Vandana Pednekar-Magal	pednekav@gvsu.edu	(616) 331-3668
Chair of Biomedical Sciences	Dan Bergman	bergmand@gvsu.edu	(616) 331-3318
Chair of Movement Science	Christina Beaudoin	beaudoi@gvsu.edu	(616) 331-3023
Chair of Psychology	Robert Hendersen	hendersr@gvsu.edu	(616) 331-2195
Chair of Cell and Molecular Biology	Mark Staves	stavesm@gvsu.edu	(616) 331-2315
Chair of Chemistry	George McBane	mcbaneg@gvsu.edu	(616) 331-3317

Kirkhof College of Nursing

Title

Dean of Kirkhof College of Nursing

Administrative Assistant to the Dean
Associate Dean for Undergraduate Programs
Associate Dean for Graduate Programs
Associate Dean for Research and Scholarship
Assistant Dean for Practice
Executive Director of the Bonnie Wesorick Center for Health Care Transformation
Academic Community Liaison – Clinical Placements
Director of the Office of Student Services
Director of Communications and External Relations

Contact person

Cynthia McCurren
Jill Smalldon
Janet Winter
Karen Burritt
Sandra Spoelstra
Patricia Thomas
Evelyn Clingerman

Email

mccurrec@gvsu.edu
smalldoj@gvsu.edu
wintejan@gvsu.edu
burritka@gvsu.edu
spoelsts@gvsu.edu
thopatri@gvsu.edu
clingere@gvsu.edu
tamara@gvsu.edu
nortonkr@gvsu.edu
monteruk@gvsu.edu

Phone

(616) 331-5726
(616) 331-5726
(616) 331-5580
(616) 331-5585
(616) 331-5905
(616) 331-3558
(616) 331-5767
(616) 331-2510
(616) 331-5637
(616) 331-5882

Office of the Vice Provost for Health

Title

Vice Provost for Health

Administrative Assistant to the Vice Provost for Health
Director of University Clinical Initiatives
Director of Simulation
Director of Interprofessional Initiatives and Special Projects
Health Compliance Officer
Director of the GVSU Scribe Academy

Contact person

Jean Nagelkerk
Sara Walker
Kathrine Branch
Doris French
Brenda Pawl
Warren Olson
Jeff Trytko

Email

nagelkej@gvsu.edu
walkers1@gvsu.edu
branchka@gvsu.edu
frenchdo@gvsu.edu
pawlb@gvsu.edu
olsonwa@gvsu.edu
trytkoj@gvsu.edu

Phone

(616) 331-2729
(616) 331-2729
(616) 331-5811
(616) 331-5911
(616) 331-5960
(616) 331-5867
(616) 331-5943

Seidman College of Business

Title

Dean of Seidman College of Business

Administrative Assistant to the Dean
Associate Dean of Seidman College of Business
Assistant Dean, Seidman Student Academic Services
Director of Executive Education Programs
Director of External Relations and Communications
Director of the School of Accounting
Chair of Economics
Chair of Finance
Chair of Management
Chair of Marketing

Contact person

Diana Lawson
Dana Lewis
Paul Isely
Joy Gianakura
Barry Van Dyck
Vonnice Herrera
Rita Grant
Aaron Lowen
Susan Edwards
Jaideep Motwani
Doug Robideaux

Email

lawsond1@gvsu.edu
lewisd@gvsu.edu
isely@gvsu.edu
gianakuj@gvsu.edu
vandyckb@gvsu.edu
herrera@gvsu.edu
grantr@gvsu.edu
lowena@gvsu.edu
edwardss@gvsu.edu
motwanij@gvsu.edu
robidead@gvsu.edu

Phone

(616) 331-7385
(616) 331-7444
(616) 331-7418
(616) 331-7394
(616) 331-7246
(616) 331-7383
(616) 331-7409
(616) 331-7409
(616) 331-7441
(616) 331-7467
(616) 331-7476

Seymour and Esther Padnos College of Engineering and Computing

Title

Dean of Esther and Stuart Padnos College of Engineering and Computing

Administrative Assistant to the Dean
Associate Dean Padnos College of Engineering and Computing
Director of School of Engineering
Director of Partnership Development and Communications
Director of School of Computing and Information Systems
Chair of Occupational Safety and Health Department
Coordinator of Professional Science Master's Program
Chair of Biomedical Engineering Master's Program
Chair of Medical and Bioinformatics Master's Program
Chair of Computing and Information Systems Master's Program

Contact person

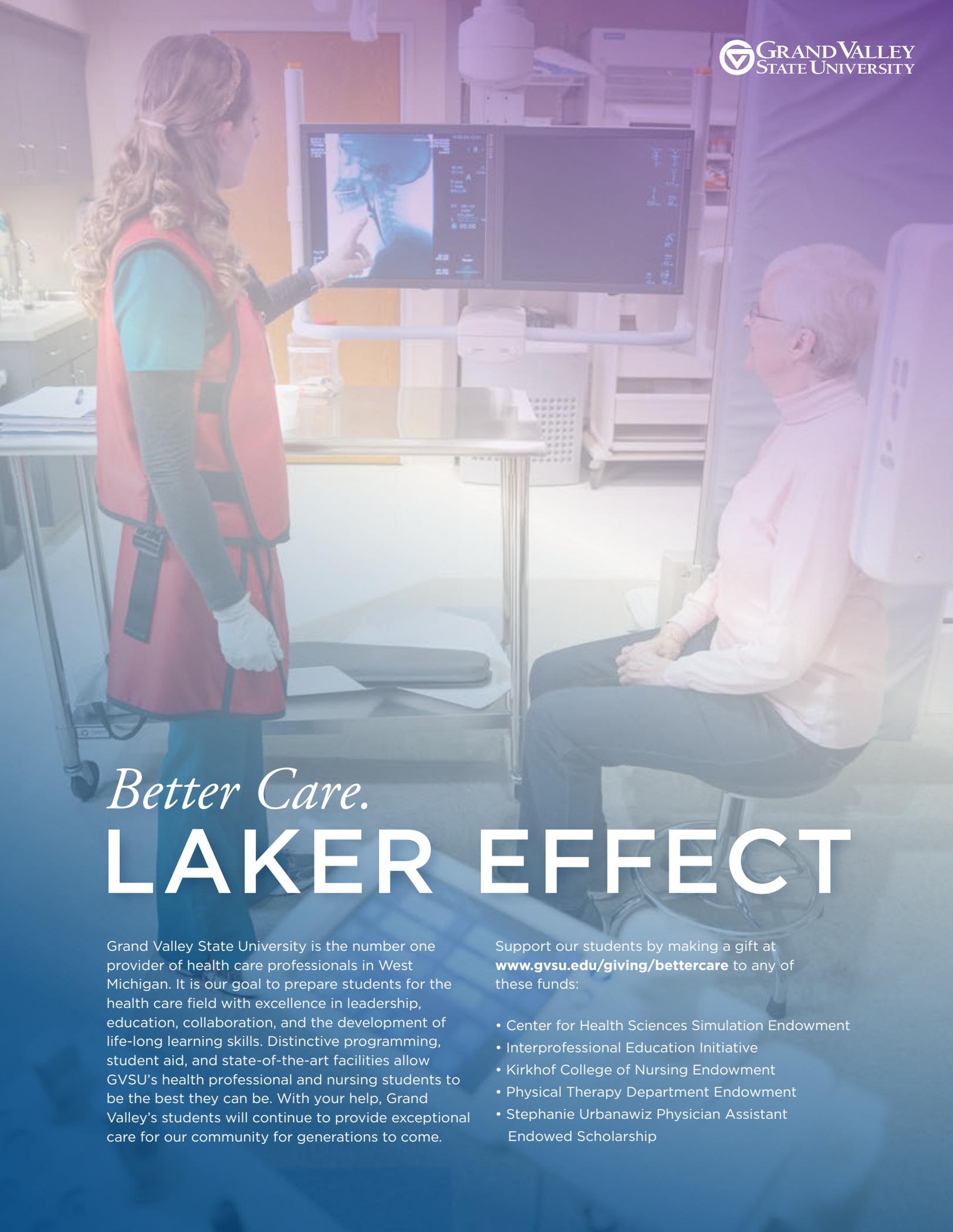
Paul Plotkowski
Patti Eisen
Charlie Standridge
Wael Mokhtar
Michelle Lindale
Paul Leidig
Dave Huizen
Tim Born
Samhita Rhodes
Guenter Tusch
Robert Adams

Email

plotkowp@gvsu.edu
eisenp@gvsu.edu
standric@gvsu.edu
mokhtarw@gvsu.edu
lindalem@gvsu.edu
leidig@gvsu.edu
huisend@gvsu.edu
bornti@gvsu.edu
rhodesam@gvsu.edu
tuschg@gvsu.edu
adamsr@gvsu.edu

Phone

(616) 331-6260
(616) 331-6260
(616) 331-6260
(616) 331-6750
(616) 331-6260
(616) 331-2060
(616) 331-6300
(616) 331-8643
(616) 331-6267
(616) 331-2046
(616) 331-3885



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