GRAND VALLEY STATE UNIVERSITY

2015 Annual Health Report

Transforming Health Care

Grand Valley State University
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Cook-DeVos Center for Health Sciences

LETTER FROM THE VICE PROVOST OF HEALTH

I am pleased to share with you Grand Valley State University's second *Annual Health Report*. In this year's publication, we highlight examples of how university students, faculty and staff members, alumni, and community partners are "Transforming Health Care" through education, practice, research, and service. These examples represent the ideas, efforts, and accomplishments of the individuals associated with Grand Valley's outstanding programs and partnerships.

The contents of the *Annual Health Report* document Grand Valley's position as the major provider of health professionals in West Michigan, and showcase not only the current strength of our students, faculty, and staff, but also the promise of an even more substantive future resource for scholarship, community service, and population health.

In addition, the publication demonstrates the wealth of Grand Valley's health science programs and the role that they play in the development of West Michigan's expansive health care community. As we educate the next generation of health care professionals, we continually strive to offer the most cutting-edge programs and advanced learning opportunities.

- Grand Valley has 74 health sciences and health-related programs, including six minors and three graduate certificate programs.
- 8,937 undergraduate and 1,538 graduate students were enrolled in health-related programs in academic year 2014-2015.
- Recent program additions include a bachelor's degree in health information management, master's degrees in dosimetry and school psychology, and emphasis options in American Sign Language and respiratory therapy.

Through partnerships with area health care institutions, clinical experiences, and other interprofessional outreach efforts, Grand Valley is poised to offer full support to the growth and changes of the health care industry in Michigan and across the country.

As our health science programs continue to grow and expand, so will the reach of Grand Valley's community presence. The *Annual Health Report* provides evidence for the value of partnering with the university, and we are eager to invite new collaborators to join us. Grand Valley is substantially enriched by our community, and we believe our community can continue to benefit from the university's programs and initiatives.

Thank you for your interest in Grand Valley State University.

Best Regards,

Jean Nagelkerk, Ph.D., F.N.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 these 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.

American Sign Language Emphasis

The Allied Health Sciences department, in the College of Health Professions, now offers an additional emphasis within the allied health sciences degree — American Sign Language (ASL) interpreting. Grand Valley is one of two institutions in the state of Michigan, and the only institution in the western half of the state, to offer an ASL interpreting program at the bachelor's degree level. The emphasis is designed to provide students with entry-level skills in the sign language interpreting profession, and it focuses on language development and interpreting proficiency, along with cultural competencies.

Students learn the major linguistic features of ASL and develop their expressive and receptive ASL skills. Additionally, they learn how to interpret and transliterate between English and ASL, focusing on the settings where interpreters tend to work primarily: medical, mental health, legal, social services, and education. These skills are developed both in the classroom and in hands-on practicum placements.

American Sign Language interpreters are highly skilled professionals who facilitate communication between hearing and deaf/hard-of-hearing individuals. Schools, government agencies, hospitals, court systems, entertainment venues, and private businesses all employ interpreters.

Interpreters need to be fluent in both English and ASL because they must be able to listen to another person's words, inflections, and intent and simultaneously produce that information in the visual language of ASL. The interpreter also must be able to understand the signs, inflections, and intent of the deaf consumer and simultaneously convey that information vocally in clear, appropriate English.

Students also study the history and culture of the deaf community, both through classroom materials and through interaction with members of the local deaf community. For more information, please contact Misti Ryefield, assistant professor of allied health sciences at ryefielm@gvsu.edu.

Grand Valley is one of only two institutions in Michigan to offer a bachelor-level American Sign Language program.

A federal grant supports the expansion of physician assistant program offerings to Northern Michigan.

GVSU's Physician Assistant Program in Traverse City

Grand Valley State University's Master of Physician Assistant Studies (MPAS), part of the College of Health Professions, has expanded to Traverse City, MI. The expansion of the program has been partially funded by a grant from the United States Department of Health and Human Services Administration with the intent of increasing the number of practicing physician assistants in northern Michigan.

Over several years Grand Valley's MPAS faculty has investigated ways that the program can help improve health care in Michigan. Spearheaded by Professor and Associate Dean of Research Theresa Bacon-Baguley, Ph.D., and supported by MPAS Program Chair Andrew Booth PA-C, the faculty completed an extensive review of the research pertaining to the health care needs in Michigan and how students' educational experiences impact their future geographical areas of practice. "Studies have shown that practitioners tend to stay and practice where they receive their education. Increasing our cohort size at the main campus would not necessarily help increase providers in rural and underserved areas. We needed to bring the program to them" said Bacon-Baguley. Booth explained that "there has been significant support from the community and Northwestern Michigan College. We could be happier to be working with individuals who share our goal of giving back to the community and improving health care in Michigan."

The MPAS program in Traverse City is fully accredited and has hired two full-time faculty members: Amanda Ross, PA-C, with experience in family practice and rural health care, and Nicholus Kopacki, PA-C, with experience in emergency medicine and cardiology. The first cohort of students has been accepted and started classes August 2015.

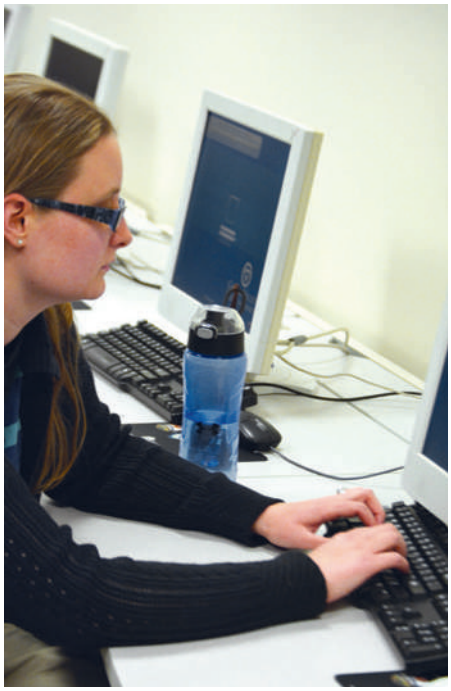
The Grand Valley Master of Physician Assistant Studies program in Traverse City is housed in the Northwestern Michigan College University Center.

Health Information Management Degree

Beginning August 2015, Grand Valley State University's College of Health Professions began offering a new degree program, health information management (HIM), which replaces the emphasis in health information and reimbursement (HIR). Health information is a growing field and shortages will occur due to the implementation of a new coding system called International Classification of Disease ICD-10 and the increase of baby boomers as patients. On October 1, 2015, all physician offices, hospitals, insurance companies, and anyone who will utilize the ICD coding system will implement ICD-10. According to the Bureau of Labor Statistics, employment for health information professionals is projected to grow 22 percent from 2012–2022. This projected growth is much faster than average for all occupations. More than half of new health information graduates with bachelor's degrees start with salaries in the $40,000 to $60,000 range.

The program gives students a wide range of career opportunities, such as coder for inpatient and outpatient services, manager of coding, director of health information management, physician educator, HIPAA compliance officer, risk manager, cancer data professional, and clinical documentation specialist. New jobs are expected in offices of physicians as a result of increasing demand for detailed records, especially in large group practices. New jobs also are expected in home health care services, outpatient care centers, and nursing and residential care facilities. Managers are needed to supervise/direct users of electronic health records (EHRs), coding systems, data retrieval, release of information, patient access, billing, and other related areas.

Students complete a 12-credit, 13-week field practicum that allows them to work within health care settings and apply the knowledge and skills learned through the HIM courses. As part of their coursework, students learn



about health care in other countries by researching different national health care systems and comparing statistics of the United States and other countries with the use of the ICD-10. In every course, students collaborate on assignments, projects, and problem-based learning; these learning activities will be achieved by applying critical thinking and decision-making skills. Once students complete the program, they are qualified to sit for a national exam to obtain the Registered Health Information Administrator (RHIA) credential. The credential is recognized throughout the country and is essential for graduates to obtain employment within the health care field.

Medical Dosimetry Program Approved

Grand Valley State University admitted the first cohort of students in the Master of Science degree in medical dosimetry for the fall semester 2015. Medical dosimetrists are an integral part of the radiation oncology team working closely with medical physicists and physicians to develop treatment plans for patients receiving radiation treatments.

Grand Valley is one of four universities in the nation to offer a master's degree program in medical dosimetry.

Grand Valley is one of four universities in the nation to offer a master's program in medical dosimetry and currently offers the only medical dosimetry program in Michigan. The 12-month, 37-credit program prepares students to sit for the Medical Dosimetrist Certification Board (MDCB) examination. The university will also offer a 22-credit degree completion option for dosimetrists who are already board-certified and wish to earn a M.S. degree.

Currently practicing radiation therapists might be interested in enrolling in the program to continue their education and for job advancement. Students are not required to be radiation therapists to enroll in the program; however, coursework in areas such as math, physics, anatomy and physiology, and radiation therapy will be required prerequisites for the medical dosimetry program. Job opportunities are expected to grow through 2025, and graduate level dosimetrists will be in high demand. Currently, Grand Valley has contracted with 12 hospitals in the Great Lakes region to serve as clinical sites for the students and welcomes involvement from additional hospitals with radiation oncology departments.

The first cohort is expected to complete their M.S. degrees in dosimetry in August of 2016. The program has applied for accreditation by the Joint Review Commission for Education in the Radiologic Sciences (JRCERT) and is expected to be accredited by the graduation of the first cohort.

Master's and Specialist Program in School Psychology

Schools across the nation face the difficult task of meeting the needs of students with increasingly diverse academic, social, and emotional needs. They must strive to raise achievement for all students, including those who may present learning or social difficulties. School psychologists play an integral role in developing effective educational systems that meet the needs of all students.

Traditionally, the role of school psychologists is focused on conducting assessments to determine special education eligibility. However, their role is rapidly shifting to also include prevention, intervention, and

The school psychology program's first cohort of students began in Fall 2014.

collaboration with other school professionals to improve the educational experience for all students. Recognizing the need for school psychologists who have expertise in prevention and intervention, faculty at Grand Valley State University developed a new, innovative graduate training program for school psychology. The program trains students broadly to support students and teachers using evidence-based strategies and techniques. Amy Campbell, the program's director, says "The school psychology program will graduate leaders and innovators who work collaboratively with school-based teams to lead advancements in education around the state and the country."

The new program is an offering of the College of Liberal Arts and Sciences. Students earn both master's and specialist degrees in school psychology, and a graduate certificate in applied behavior analysis upon completing the three-year program. Throughout the program, students apply content and concepts learned in coursework by working in local schools through practice, and a final, year-long, full-time internship.

Respiratory Therapy Emphasis

Grand Valley State University and Muskegon Community College (MCC) have formed a unique collaborative where up to 18 qualified Grand Valley students majoring in allied health sciences (AHS) can enter the accredited respiratory therapy program at MCC each year. At graduation, these students will simultaneously earn both an Associate of Applied Sciences degree in respiratory therapy from MCC and a Bachelor of Science degree in allied health sciences with an emphasis in respiratory care from Grand Valley.

Conversely, graduates of the MCC respiratory therapy program (or any accredited associate degree respiratory therapy program) may apply to Grand Valley to complete their Bachelor of Science in allied health sciences with respiratory care emphasis. These bachelor's degree completion students may transfer up to 80 credits from their associate degree in respiratory therapy, leaving only 40 credits to be completed at Grand Valley to fulfill general education requirements.

Respiratory care is an allied health profession providing diagnosis and treatment to persons with breathing disorders. Respiratory therapists may interview patients, conduct chest physical exams, as well as analyze breath, tissue, and blood specimens to determine oxygen and other gas levels. They consult with physicians to recommend changes in therapy based on their evaluation of patients. Another important role of the respiratory therapist is providing education about lung disease to patients and families so they can maximize their recovery.

Collaboration between Grand Valley and Muskegon Community College expands student options for a respiratory therapy emphasis.

GVSU offers **74** health-related programs.

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 from 2014-2015. 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.

Aging and Adult Life (Minor)	39
Allied Health Sciences (Bacc.)	609
Allied Health Sciences — American Sign Lang Interpret (Bacc.)	10
Allied Health Sciences — Health Information Management (Bacc.)	60
Allied Health Sciences — Histotechnology (Bacc.)	1
Allied Health Sciences — Predosimetry Studies (Bacc.)	8
Allied Health Sciences — Prephysical Therapy Services (Bacc.)	70
Allied Health Sciences — Prephysician Assist Studies (Bacc.)	262
Allied Health Sciences — Speech-Language Pathology (Bacc.)	249
Athletic Training (Bacc.)	296
Athletic Training — Physical Therapy (Bacc.)	1
Biochemistry (Bacc.)	40
Biology — Genetics and Cell/Molecular Biology (Bacc.)	25
Biology — Physical Therapy (Bacc.)	14
Biology (Bacc.) — Predental	18
Biology (Bacc.) — Premedical	48
Biology (Bacc.) — Pre-osteopathic	3
Biomedical Engineering (Minor)	75
Biomedical Sciences (Bacc.)	1,360
Biomedical Sciences — Echocardiography and Vascular (Bacc.)	1
Biomedical Sciences — Microbiology (Bacc.)	40
Biomedical Sciences — Nutrition Sciences (Bacc.)	59
Biomedical Sciences (M.H.S.)	13
Biopsychology (Bacc.)	98
Biostatistics (M.S.)	40
Business General — Health Sector Management (M.B.A.)	3
Cell and Molecular Biology (Bacc.)	101
Cell and Molecular Biology — Biotechnology (M.S.)	27
Cell and Molecular Biology — Research (M.S.)	10
Chemistry — Biochemistry and Biotechnology (Bacc.)	67
Clinical Research Trials Management (P.B.Cer)	6
Diagnostic Medical Sonography (Bacc.)	273
Diagnostic Medical Sonography — Breast Ultrasound (Bacc.)	1
Diagnostic Medical Sonography — Echocardiography and Vascular (Bacc.)	52
Engineering — Biomedical Engineering (M.S.E.)	6
Exercise Science (Bacc.)	61
Exercise Science — Clinical Exercise Science (Bacc.)	867
Exercise Science — Health Fitness Instruction (Bacc.)	393

Health Administration (M.H.A.)	95
Health Communication (Bacc.)	139
Health Communication — Public Relations (Bacc.)	1
Health Care Information Systems (Minor)	74
Medical and Bioinformatics (M.S.)	20
Medical Laboratory Science (Bacc.)	99
Nursing (Bacc.)	1,329
Nursing (D.N.P.)	1
Nursing — Adult/Older Adult Clinical (D.N.P.)	74
Nursing — Child/Adolescent Clinical (D.N.P.)	18
Nursing — Health Systems Leadership (D.N.P.)	7
Nursing — Nursing Administration and Health Care (D.N.P.)	8
Nursing (M.S.N.)	3
Nursing — Advanced Generalist (M.S.N.)	15
Occupational Safety/Health Management (Bacc.)	84
Occupational Safety/Health Management (Minor)	6
Occupational Therapy (M.S.)	168
Physical Therapy (D.P.T.)	202
Physician Assistant Studies (M.P.A.S.)	143
*Preprofessional Preparation (Bacc.)	713
Psychology (Bacc.)	1,385
Psychology (Minor)	869
Public Administration — Health Administration (M.P.A.)	38
Public Health (M.P.H.)	91
Public Health — Epidemiology (M.P.H.)	8
Public Health — Health Promotion (M.P.H.)	9
Public Health — Public Health Administration(M.P.H.)	1
Public and Nonprofit Administration — Community Health (Bacc.)	93
Radiation Therapy (Bacc.)	110
Radiologic and Imaging Sciences (Bacc.)	69
School Health Education (Minor)	87
School Psychology (M.S.)	11
School Psychology (Psy.S)	11
Social Work (Bacc.)	568
Social Work (M.S.W.)	446
Speech-Language Pathology (M.S.)	110
Therapeutic Recreation (Bacc.)	187
Unduplicated Count	**10,475**

*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.

INNOVATIONS IN TEACHING

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 real, practical solutions to real health-related issues.

Biomechanics and Motion Analysis Laboratory

The state-of-the-art Biomechanics and Motor Performance Laboratory (BMPL) is located at the Cook-DeVos Center for Health Sciences and housed within the Physical Therapy Department of the College of Health Professions. The BMPL is used for a wide variety of research and teaching activities for undergraduate and graduate students across several programs. These activities serve to enrich student learning within curricula, provide opportunities for high-level research-based internships and experiences, and offer a mechanism for collaboration between university faculty and community partners. Many basic and applied research questions can be answered using the lab's technology.

The laboratory has the capability to perform 3-D motion analysis, producing both kinetic and kinematic data with the use of an 8-camera Vicon System and force platforms from Advanced Mechanical Technology, Inc.

Faculty members and students from physical therapy, occupational therapy, movement science, and engineering work collaboratively to describe, analyze, and compare human movement with regard to walking (gait), running, and additional functional movements (e.g. squatting).

Engineering Professor Blake Ashby has regularly used the Biomechanics and Motor Performance Laboratory for his teaching and research activities. Students in his *Engineering Mechanics of Human Motion* course collect and analyze data using the Vicon motion capture system, EMG system, and Biodex dynamometer. He has advised engineering students who have used the laboratory to collect data on the biomechanics of hand function when performing sonography, gait, and jumping for their master's theses. The results from these studies have been disseminated in several national conferences and journal publications.

Surface electromyographic (EMG) analysis of muscle activation/activity can be performed in conjunction with or separately from 3-D motion analysis using the Motion Lab Systems 16-channel EMG equipment. A project completed in 2013 by physical therapy students used the EMG system to examine muscle activity associated with squatting.

In addition to 3-D motion analysis, the lab has several other capabilities, supporting both students and faculty in their work. Temporal and spatial parameters, as well as selected floor reaction forces related to walking, can be studied using the Kistler Gaitway instrumented treadmill. Physical Therapy Professor Gordon Alderink and movement science undergraduate students interning in the BMPL are using this instrument to establish a control gait dataset on adults aged 20–80 years of age.

Postural analysis can be performed using the Neurocom Smart Equitest for the assessment of research volunteers and patients with movement disorders related to Parkinson's disease, following stroke, or post-traumatic head injury, as well as those with vestibular dysfunction and musculoskeletal injury that affects the postural systems. Physical therapy professors Harro and Baker and their PT doctoral students have used Equitest protocols in their research involving persons with Parkinson's disease and multiple sclerosis. This device is also used in rehabilitation settings for treatment as well as testing, so all PT doctoral students are trained in its use.

Muscular strength, power, and endurance can be evaluated using the Biodex Isokinetic Dynamometer. This device is important for teaching students to understand muscular actions, objective muscular assessment, and can be used to reliably assess musculoskeletal deficits after injury or surgery in many regions of the body including the lower and upper extremities and the trunk.

More information about research and educational activities about the BMPL can be obtained from Lab Director Gordon Alderink, PT, Ph.D., at aldering@gvsu.edu.

PAS Professor Molly Paulson and PAS student Eric Ferrigan with a standardized patient.

Standardized Patients and Student Education

The standardized patient program at Grand Valley recruits, hires, and trains community members to portray patients with a variety of conditions, symptoms, and diseases. These unique employees of the university provide students with the opportunity to practice and fine-tune their communication, interviewing, and assessment skills. The program hires both adults and children to meet the learning needs of Grand Valley students.

Standardized Patient Coordinator Cindy Bartman comments, "The program provides students with experiences designed to build their self-confidence and expand their clinical skills as emerging health care professionals. The program better prepares students for their clinical rotations where they will work with actual patients."

Grand Valley students in the Kirkhof College of Nursing and the College of Health Professions begin their clinical experiences working in the Simulation Center with these standardized patients. In addition, the program has recently started working with students from the School of Social Work. Frequently, the program will also bring together students from multiple disciplines to learn about, from, and with each other in specifically designed interprofessional education (IPE) experiences.

The standardized patient program operates whenever classes are in session. The patients can be found working with students in the

Physician assistant studies student Leidy Rufin examines a standardized patient.

Cook-DeVos Center for Health Sciences during the day, evening, and on the weekends during fall, winter, and spring/summer semesters.

In addition to supporting Grand Valley's students, the program provides a unique opportunity for community partnerships. The standardized patients bring a variety of past work and life experiences to the work they do, as well as a common commitment to positively impact the future of health care through the development of the next generation of care providers.

The program is also the focus of a number of faculty research projects that are designed to study different aspects of the standardized patient teaching methodology. Operating under the oversight of the Office of the Vice Provost for Health, the standardized patient program is an example of the innovative work being done at Grand Valley to support the education and development of health care professionals in partnership with the community they serve.

sHaPe Camp

"Thank you for making this week of sHaPe camp possible! I loved it."

"Thank you for sponsoring this camp and giving us your time. The activities and counselors were awesome!"

"Thank you for paying for me to go to this camp. My favorite part was learning about all the careers that didn't involve blood!"

"Thank you for letting us go to your hospital to learn more about health careers. My favorite part was being in the surgery room and doing activities."

These are just a few of the comments received after the Summer Health Activities and Professions Exploration (sHaPe) Camp. Thanks to the generous grant support of community partners Meijer, Mercy Health Saint Mary's, Kent County Medical Alliance, and the Grand Rapids Junior League, sHaPe Camp successfully gave area middle school students hands-on exposure to the health professions. The experience comes at the time in their lives when they begin to consider their future careers. In its sixth year, the camp was offered at the Cook-DeVos Center for Health Sciences and was at capacity with 40 participants.

Over the four days of sHaPe Camp students were exposed to a variety of educational opportunities. They learned about the physician assistant, athletic training, and radiology professions through hands-on activities. They discovered the need for compassion for disabled patients through occupational therapy, physical therapy, therapeutic recreation, and speech-pathology professions. In addition, they had the opportunity to use state-of-the-art equipment introducing them to the field of medical lab science.

Students from sHaPe Camp pose with Mercy Health's sponsor banner.

Grand Valley's sHaPe Camp also emphasizes a healthy lifestyle. Each day, the students were served healthy lunches and snacks, exercised, and participated in other activities which taught them the importance of living healthy lifestyles. Meijer representatives presented a session about selecting healthy foods in grocery stores.

sHaPe is a unique opportunity available to urban students in Grand Rapids Public Schools. The students are able to attend the camp free of charge, with transportation being provided to and from the camp. Several organizations are committed to seeing this youth population succeed. Grand Rapids Public Schools' Harrison Park Elementary promotes, registers, and follows up with their students to make sure they attend sHaPe Camp and has made sHaPe Camp a part of their strategic plan. Mercy Health Saint Mary's campus outreach coordinator worked closely with Grand Valley and within Mercy Health to ensure an outstanding program for the students.

In addition to the financial supporters, sHaPe Camp could not be as successful as it is without the Grand Valley students who served as counselors and the many volunteers who give their time to work with campers. Seventy-nine volunteers from Grand Valley and Mercy Health shared their expertise and time with the future health care professional campers.

Maternal Fetal Simulator

Grand Valley's Simulation Center, located within the Cook-DeVos Center for Health Sciences, recently purchased the newest and most technologically advanced childbirth simulator available. The newest CAE Fidelis™ simulator, Lucina, became available in late 2014. Lucina, a totally wireless patient simulator, can not only simulate all the stages of labor and delivery as a maternal fetal simulator (MFS), but it can also serve as a nonpregnant simulator using the appropriate abdomen module and software. As an MFS, she presents a more realistic and controllable birthing simulation with a very accurate delivery process that can be programmed or manually manipulated to simulate numerous birthing situations, such as breech delivery, eclampsia, and umbilical prolapse.

Learners can manage situations such as shoulder dystocia by performing actual birthing maneuvers on the MFS, potentially correcting the abnormality. Shoulder dystocia is among 10 preconfigured scenarios that come ready to operate with the purchase of the simulator. The simulator gives birth to a fetal simulator that cries upon delivery. Additional items include a fetus that supports Leopold's maneuvers, two abdomens (one for delivery and one for antepartum and postpartum), and various cervices for vaginal exams. Lucina is very lifelike in appearance, being 5 foot 9 inches tall and weighing 111 pounds. Her limbs are weighted realistically and are anatomically mobile for accurate procedures to be performed.

Another feature of the Lucina simulator is the ability to attach a monitor that displays both the fetal heart rate and contractions. Not only are the learners able to see the contractions on the monitor, but they can also palpate, giving the learner a very real experience that is often difficult for learners to obtain in the clinical settings.

Two simulation team members from the Office of the Vice Provost for Health recently attended the CAE Healthcare Training Academy for an extensive three-day, in-house simulator training session.

Nursing student works with Lucina, the advanced maternal simulator.

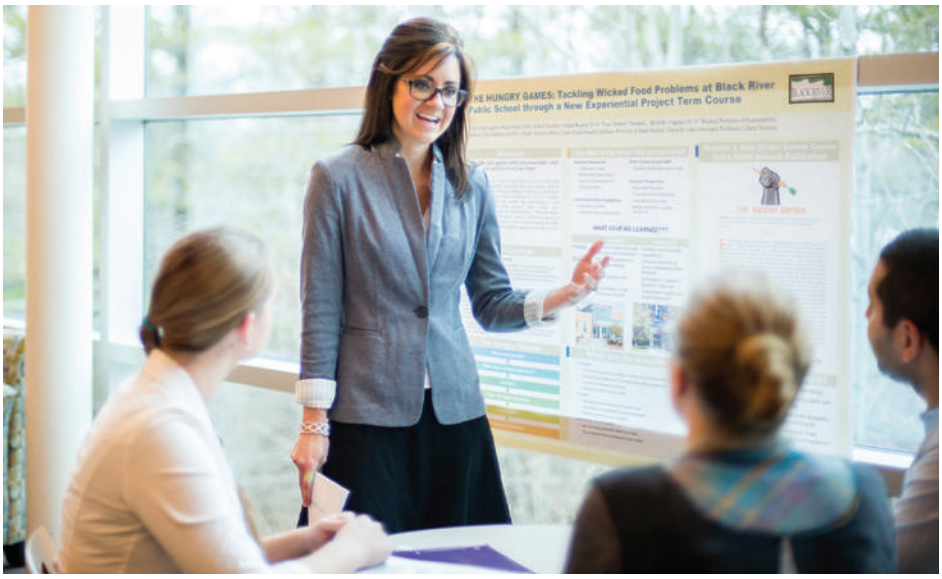
Physical therapy Professor Lisa Kenyon examines a young boy as physical therapists from Beijing observe Kenyon's techniques.

Physical Therapy Faculty Lays Groundwork in China

College of Health Professions Professor Lisa Kenyon traveled to China over spring break 2015 to help Chinese physical therapists improve their skills in working with children who have special needs. At the Beijing School for the Blind, Kenyon conducted a full-day training related to using facilitation techniques with children who have neurodevelopmental conditions. At the Beijing Children's Hospital, Kenyon provided a half-day training session related to physical therapy (PT) management of children with encephalitis. Kenyon also provided lectures for Western-educated pediatric physical therapists who currently live and work in China.

Although education for physical therapists in the United States is at a clinical doctorate level, education for physical therapists in China is just now being formalized at a baccalaureate level. At Kunming Medical University in Kunming, China, Kenyon provided a two and one half-day workshop related to clinical education in PT education. More than 50 physical therapy educators from throughout China attended the training in person and another 28 educators attended the presentation via a live video feed.

Kenyon stated that her work in China has had an incredible impact on her view of the world, and she's able to bring that home to her PT students at Grand Valley. She uses many of the videos taken on her visits to the Beijing hospital in her pediatric courses. She is currently working on establishing opportunities for her doctoral PT students and the Chinese students to discuss pediatric cases using Skype or other conferencing methods. Kenyon hopes her work in China will lay the foundation for future partnerships.



Liberal studies Professor Danielle Lake discusses the outcome of students' efforts in *The Hungry Games* project at Black River Public Schools.

Students Develop Course for Black River Public Schools

Recognizing the wicked (intractable and complex) dimensions of our current food system and its impact on children, the students of Professor Danielle Lake's LIB 322 class, *Wicked Problems of Sustainability*, were empowered to tackle an aspect of this system in the local community. The course is an offering of the Liberal Studies Department. These students, identifying themselves as "the curriculum artisans," envisioned the creation of an experiential, hands-on, farm-to-table course for local K–12 children. With their values, experiences, and interdisciplinary research in mind, the students worked with Black River Public School teacher Angela Aumaugher during the Winter 2014 semester to create the project-based, term course.

As the Fall 2014 semester arrived, students from professor Anne Marie Fauvel's LIB 342 class, *Food Matters*, reviewed the published findings of the "artisans" and took up the work of designing a course for Black River Middle School students. Through interdisciplinary research on food pedagogies, the students from Fauvel's class helped establish community partners for Black River students and developed curriculum for the course. The students ultimately created a new course called *The Hungry Games*!

This new project-based, term course was offered in the spring of 2015. *The Hungry Games* begins by asking middle school students why they should care about food. Through field trips, guest speakers, and community partnerships, students in the class explored where their food comes from, its nutritional components, and various disposal practices. *The Hungry Games* empowers agency in response to our current food system by using a learn-by-doing approach with the students. At the end of the course, the students are able to synthesize their learning and present their findings in their local community. According to Lake, this was a unique opportunity for the faculty of the Brooks College of Interdisciplinary Studies to bridge semesters and courses, allowing students to integrate and innovate around complex social issues. Students had the reward of seeing their work provide an immediate impact.

Grand Valley students' published findings can be viewed at http://scholarworks.gvsu.edu/wickedproblems/.

Hospitality Students Research Restaurants and Diabetes

One of the triumvirate of important strategies in diabetes management is diet. Three sections of students enrolled in HTM 375, *Hospitality and Tourism Research*, during the Fall 2014 semester used the Nutrition Environment Measures Survey (NEMS) restaurant instrument developed by the Center for Health Behavior Research at the University of Pennsylvania to examine the menus of the 315 restaurants in Grand Rapids. Students, led by Professor Michael Scantlebury, assessed the availability of healthy food items and foods prepared with healthy methods. The types of restaurant in the study included fine dining, quick service/fast food, bars and pubs, casual/American dining, and ethnic restaurants. Students discovered that it was primarily the quick service/fast food establishments that provided nutritional information and dietary options.

Students also explored the question: Do diabetics pay a premium for healthy dining options? Complying with informed consent practice, each of the 60 students engaged three persons with diabetes in a qualitative survey using a convenience sample framework to interview friends and family. Responses varied between Type I or Type II diabetes, and respondents' age. Older Type II diabetics, who had the condition for a number of years, indicated that they would not likely pay a premium for healthy food. Younger Type I diabetics, especially Grand Valley students, indicated that their limited financial resources restricted their ability to pay a premium for healthy dining options. The project afforded students the opportunity to apply research methods to real-world problems.

STUDENT LEADERSHIP, DEVELOPMENT, AND ACHIEVEMENT

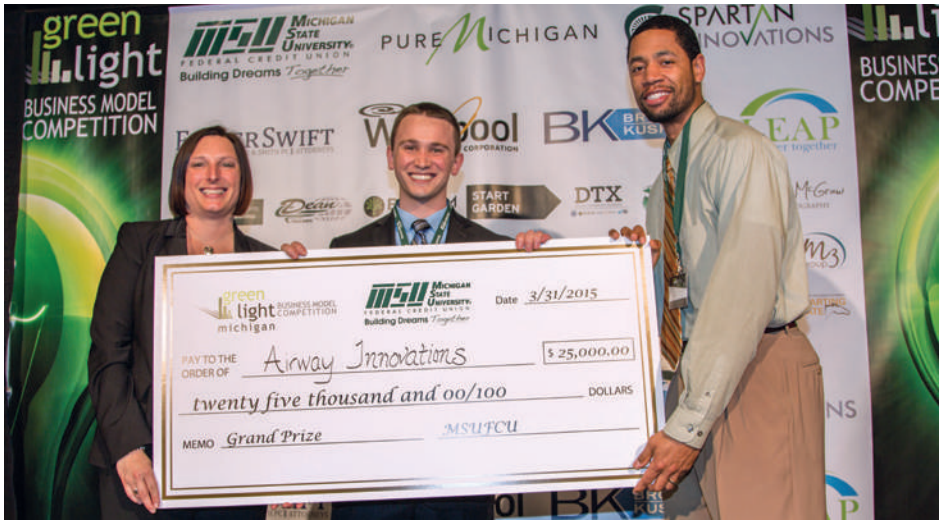
Grand Valley attracts the best and brightest students in the health sciences. The average gradepoint average for students entering each of our top health programs is 3.6 or higher, and scholarship is critical to the success of Grand Valley's health-related programs. Our students and faculty members don't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

Engineering Student Takes Top Awards

Eric VanMiddendorp, a student in the Master of Science in engineering program with the mechanical engineering emphasis, was selected to participate in Grand Valley's Industry-sponsored graduate fellow program and was assigned to Spectrum Health Innovations to design and develop medical devices to solve problems identified by clinicians at Spectrum Health hospitals. The program, offered by Grand Valley's Seymour and Esther Padnos College of Engineering, provides highly motivated engineering students with the unique opportunity of earning a graduate degree and professional experience simultaneously. Students perform supervised engineering assignments and applied research at a sponsoring company.

VanMiddendorp's graduate fellowship began with a Michigan Initiative for Innovation and Entrepreneurship (MIIE) collaborative grant between Grand Valley, Spectrum Health Innovations, and GR Current. One of the medical devices VanMiddendorp developed was an

Medical device design earns VanMiddendorp $25,000 student grand prize.



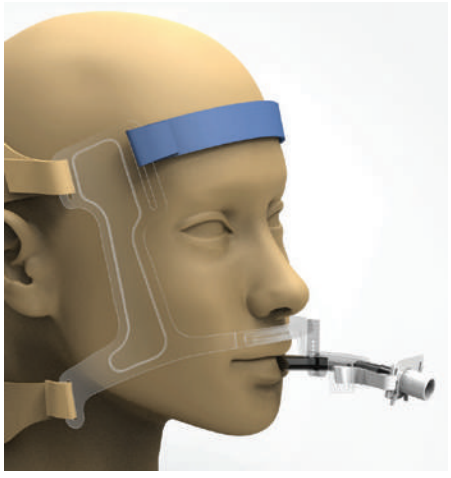
Grand Valley engineering student Eric VanMiddendorp, center, accepts the first place grand prize at GreenLight Michigan Business Competition.

endotracheal tube (ETT) holder designed to prevent unplanned extubations in which a patient's breathing tube has been removed unexpectedly, often resulting in significant airway trauma or fatality. The ETT holder also prevents damage to medical gas and vacuum outlets. VanMiddendorp worked as the lead engineer beginning with a problem statement through to a functional prototype. Clinicians at Spectrum Health were involved with the project from the start and provided feedback throughout the stages of the design, ensuring the resulting device would provide the necessary benefits and outperform other options.

At the conclusion of the grant, VanMiddendorp licensed the technology and formed a business, Airway Innovations LLC, with Spectrum Health and Grand Valley. His invention received the student first-place grand prize at the Accelerate Michigan Innovation Competition (AMIC), as well as the first-place grand prize at the GreenLight Michigan Business Competition.

VanMiddendorp plans to license the technology to an existing medical device manufacturer and distributor in return for royalties based on sales. His device has the potential to replace the devices currently used to manage breathing tubes because of the added capability of preventing tubes from being removed unexpectedly, ultimately saving lives and improving patient care. Spectrum Health has expressed interest in a trial of the device when it is available.

According to Brent Mulder, senior director of Spectrum Health Innovations, "The progress that Eric has made on each of his projects has been amazing. Starting from rough sketches, Eric was able to transform early stage ideas into working prototypes, receiving critical feedback from clinicians throughout development. We are excited by the success of the MIIE collaborative effort between Grand Valley and Spectrum Health Innovations and look forward to continuing to build upon this great relationship."



Endotracheal tube prototype

Physical Therapy Student Awards

The following students received awards from Grand Valley's Physical Therapy Department in 2014:

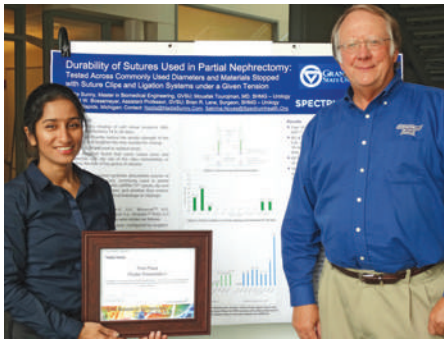
- David Daniels Scholarship: Alyssa Krikke '15 and Natasha Piper '15
- Michigan Physical Therapy Association Outstanding Student Award: Deb Serba '15
- Physical Therapy Departmental Honors Award: Kristen Vandebunte '14
- Graduate Dean's Citation for Academic Excellence in the Major: Betsy Graney '14
- Graduate Dean's Citation for Excellence in Leadership and Service to GVSU: Brett Cain '14
- Graduate Dean's Citation for Excellence in Service to the Community or Profession: Trisha Armstrong '14
- Graduate Dean's Citation for Promoting Diversity and Inclusion at GVSU: Katie Rogowski '14
- Graduate Dean's Citation for Outstanding Publication: Tiffany Basore '14 and Alyssa Polso '14
- Graduate Dean's Citation for Outstanding Final Project: Allison Gaskell, David Sefton, and Kristen Vandebunte '14
- Phi Kappa Phi Induction: Trisha Armstrong and Betsy Graney '14

Biomedical Engineering Master's Student Places First

Nadia Sunny, a recent master's degree graduate from the Biomedical Engineering Master's program in the Seymour and Esther Padnos College of Engineering and Computing, presented her thesis research at the 2015 Research Symposium for Spectrum Health System on May 20, 2015. Of the 37 posters presented during the conference, predominantly from the MSU Medical School and Spectrum Health research departments, her poster presentation was awarded first place.

Nadia's work fits into a continuum of studies begun in 2010 by students working with Grand Valley Professor of biomedical engineering Rob Bossemeyer, Ph.D., and Brian Lane, M.D., Ph.D., of Spectrum Health Medical Group, to examine the current surgical practice of suturing a wound in the kidney after removal of cancerous tissue. Sunny's characterization of the durability of various suture types used with absorbable clips while suspended under tension in a saline solution during a period of 28 days provides useful practical guidance to surgeons. Some samples of all suture types, with clips applied by an experienced surgeon, exhibited undesirable slippage during the 28-day observation period that may compromise the healing process when used in this manner following surgery.

Further studies are ongoing at the Lemmen-Holton Cancer Pavilion at Spectrum Health.



Engineering graduate student Nadia Sunny with her advisor and professor, Rob Bossemeyer

Washington, D.C., program provides M.B.A. students with insight into public policy, issues, and trends in health care.

Washington, D.C., Program: Focus on Health Care

What could be more relevant in Washington today than health care? A first-ever Washington Campus seminar focused on health care specifically for M.B.A. students was launched in June of 2014. Through this program, Grand Valley's Seidman College of Business graduate business students, working in the broad health care community, including hospitals, insurance, biopharmaceuticals, and medical devices, have the opportunity to interact directly with health care policy makers and regulators. The agenda focused on how public policy works, issues and trends in the industry, and, most importantly for these current and future health care leaders, how to manage and lead in this dynamic environment.

The Washington Campus, a nonprofit, nonpartisan, higher education consortium based in Washington, D.C., provides unique management education focused on the relationship between business and government. Current and future business leaders are immersed in the political environment of Washington, D.C., where they learn about public policy from Washington insiders, including current and past members of Congress. Presentations often occur where the action is — the Federal Reserve, Press Club, Supreme Court, among other locations. Founded in 1978 by Grand Valley's own founder and Seidman College of Business namesake, the Honorable L. William Seidman, and other senior government officials and business executives, the campus initially served M.B.A. students from a consortium of 17 universities, including some of the most prestigious business schools in the world.

Building on its success and attractiveness to M.B.A. students, the campus has for a number of years also provided seminars for business executives and has developed specialty programs for students of other graduate program backgrounds. The seminars begin with a primer on Washington politics and policy, essentially how Washington works. The agenda then varies depending on the focus of the seminar and current issues in Washington.

Case Studies and Interprofessional Education Event

The third annual Interprofessional Education (IPE) case study event brought together approximately 180 students from seven different health professions, representing four different institutions to work together through case studies. The event was held simultaneously at Grand Valley's Cook-DeVos Center for Health Sciences, Michigan State University College of Human Medicine, and Ferris State University College of Pharmacy.

Participants were each assigned to an interprofessional team that included students from nursing, physical therapy, pharmacy, physician assistant, dietetics, speech-language pathology, and physician programs. "The goal of this interprofessional education experience is for students to learn with, from, and about other health professions, and to ensure the students enjoy the conversational aspect of working through a case together," stated Charlene Dubois, director of clinical education for the physician assistant studies program at Grand Valley.

Focusing on the "IPE Core Competency of Roles and Responsibilities" (Interprofessional Education Collaborative Expert Panel, 2011), students learned about the knowledge and skills that each profession contributes to optimize the care of a patient. Speech-language pathology Professor Linda Shuster, Ph.D., commented, "I was pleased that during the debriefing, several students commented about what they learned about the role of the speech-language pathologist."

Learning also occurred in the "negative space" of the interprofessional teams that were missing a representative from a particular profession. One student expressed that their group could have benefited from having a dietitian to consult on the nutritional needs of the patient. All of the groups commented that a social worker was needed to work with the family and patient for discharge plans. According to physical therapy Professor Michael Shoemaker, D.P.T., "Students came away with a good comprehension of the interdependence of all the professions in forming the best treatment plan for the patient."

180

students from four institutions and multiple disciplines team up for case study exercises to determine best treatment plans for patients.

Students from multiple healthcare disciplines working together during a case study competition.

Student Interprofessional Education Certificate

Complexities in the current health care system require new models for delivering care. Health care agencies and institutions require staff to work together for the delivery of safe, patient-centered care. In order to prepare students for interprofessional work in health care, the Midwest Interprofessional Practice, Education, and Research Center (MIPERC), co-founded by Grand Valley State University, Grand Rapids Medical Education Partners, and Michigan State University — College of Human Medicine, has launched the interprofessional education (IPE) student certificate for students earning degrees in health and health-related disciplines. This certificate program provides recognition for students who are developing skills in the Institute of Medicine (IOM) core competencies and the Interprofessional Education Collaborative (IPEC) competency domains.

The IPE student certificate is an immersion process that requires specific interprofessional activities and self-reflection by students. Earning the certificate is a self-paced process with requirements including the completion of online education modules and service-learning hours. In addition, the student must attend the PIPES (Promoting Interprofessional Education for Students) student organization meetings and an interprofessional conference or forum, participate in a live simulation, and practice the IPEC competency domains. The certificate capstone project is a poster presentation, the summative culmination of the interprofessional experiences. The length of time required to earn the certificate is a minimum of one calendar year but can be longer based on the student's workload and ability to complete requirements. The certificate is awarded after completion of core requirements, which will be tracked via an online learning system.

The inclusion of the interprofessional education student certificate in an applicant's professional portfolio enables employers to recognize the graduate as being prepared to participate as a member of a collaborative team.

Students may begin the process by accessing the MIPERC website at gvsu.edu/miperc/. The site includes a question and answer section, links to faculty mentors, and the certificate guidelines.

Jessica VanDenToorn and Jacob Snider present their capstone project at a local conference.

Kirkhof College of Nursing Study Abroad Program Sends Students to Ghana

Twelve undergraduate nursing students from the Kirkhof College of Nursing (KCON) took part in a unique study abroad program during Grand Valley's spring break in March 2015. In its third year, the study abroad program led by KCON's Globalization Task Force and supported by KCON and the Barbara H. Padnos International Center at Grand Valley, offered students a unique intercultural experience with opportunities to study the delivery of health care through a global lens and learn how Ghana is addressing World Health Organization millennial goals. Sylvia Mupepi, Ph.D., R.N., a Fulbright Scholar and KCON faculty member, was instrumental in laying the groundwork for this student experience.

Accompanied by KCON faculty members, Maureen Ryan, M.S.N., R.N., and Norine Cunningham, M.S.N., R.N., and KCON Academic Advisor, Angela Caruso, M.Ed., the students shared a common goal to broaden their thinking and challenge themselves to grow as nurses. Students representing two cohorts of traditional and second degree students from three nursing cohorts bonded quickly as they visited hospitals and rural centers. The students learned from staff of the U.S. Embassy about how the United States is supporting Ghanaian health care through USAID (United States Agency for International Development). They also met with the University of Cape Coast dean of the school of nursing and six nursing faculty members to discuss community health nursing, struggles in the education and healthcare systems, and the importance of health advocacy at the legislative-level.

The students agree their favorite activity was pairing with Ghanaian nurses to deliver health care and education at rural health care centers. There, they interacted with the local midwives and assisted nurses educating women about reproductive health. On other occasions, students went door to door addressing health concerns of the villagers. Students enjoyed the chance to meet with the chief of the village and used health education materials developed and field tested in Cameroon by KCON faculty member, Paulette Chaponniere, Ph.D., M.P.H., R.N., to teach dental care in the elementary schools.

Akelwen Kamal, president of the Ghanaian Student Nurses' Association, was very involved in sharing his culture with KCON students. The students from both countries traveled together to markets and cultural events, and their connection through social media continues.

Chaponniere shared, "This study abroad program is unique in that our nursing students can fulfill credits while developing important attributes as nurses and global citizens." Staff from the nursing school of the University of Cape Coast and KCON faculty members Chaponniere and Mupepi provided logistical support for the trip. Plans for a fourth trip to Ghana in the spring of 2016 are underway.

Students travel to Africa to study the delivery of health care through a global lens.

Children from a village in Ghana offer gestures of peace as they pose with Grand Valley nursing students.

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.

Experiential Learning Through Movement Science Internships

The Department of Movement Science is committed to providing and enhancing field experiences that challenge students' abilities to broaden their knowledge base and refine their professional skills. The exercise science major requires that all students complete two-credit fieldwork experiences and a six-, nine- or 12-credit internship. Students work in clinical, community, corporate, and commercial settings that include experiential learning in research, health, wellness, fitness, cardiac rehabilitation, biomechanics, and/or sports performance. Internships have helped build community partnerships that enrich the education of our students and also enhance the quality of life for the people of the region, state, nation, and even sometimes beyond.

i'move, a physical therapy, athletic performance, and wellness solutions company in Grand Haven, MI, that partners with the movement science program, engages students in designing exercise programs for people of all ages and abilities. Students gain hands-on experience working directly with teams and individuals to build speed, power, and agility in high school, college, and professional athletes, as well as health, strength, and active living in adults of all ages. Joe Tofferi, director of health, fitness, and sports performance at i'move shares, "We at i'move have been deeply thrilled with Grand Valley faculty member Heather Peddie and the exercise science program as it pertains to our internship program. We have

Internships offer students experiential learning in research, health, wellness, fitness, cardiac rehabilitation, biomechanics, and/or sports performance.

"We are truly honored to have such outstanding providers in our community willing to help educate the next generation of physician assistants."

— Andrew Booth, physician assistant program director

supervised as many as 20 interns from Grand Valley in our facility in the last two years alone. They come in prepared and professional. We look to continue our relationship and see how much more we can help these students learn and be successful as they start their young careers." The company recently hired exercise science graduate Derek Rietman as their performance specialist. Derek completed both his fieldwork and internship with i'move.

MusclePharm Sports Science and Research Institute is another organizational partner with the movement science program. Chad Hughes, a recent graduate, commented, "Interning as a research assistant at the MusclePharm Sports Science and Research Institute was one of the best academic and personal experiences of my undergraduate career at Grand Valley. MusclePharm professionals were mentors who took a genuine interest in my professional and academic development, and engaged me as a colleague. They provided me with an environment that encouraged me to no longer think as just a student, but instead as a scientist." MusclePharm's research institute director, Jordan Moon, is a Grand Valley alumnus from the class of 2004.

Exercise science student interns have also completed experiences with Spectrum Health in preventive cardiology and rehabilitation, Helen DeVos Children's Hospital health weight clinic, Mary Free Bed's motion analysis center, Barwis Methods, Amway Corporation, and numerous YMCA facilities across the state. Clinical experiences typically include participation in diagnostic exercise testing, EKG interpretation, graded exercise testing, anthropometric screenings, and gait analysis. Community and corporate experiences often include biometric screening, personal training, group exercise, fitness testing, wellness coaching, health education, and assistance in running community-based programs such as the YMCA's Healthy U. Exercise is medicine for people of all ages, cultures, and abilities, and internships in exercise science reach far and wide to touch numerous, diverse populations.

Surgeons Serve as Physician Assistant Preceptors

As another successful clinical year drew to a close, students and faculty members took some time to reflect on the year and acknowledge those preceptors who had gone above and beyond while teaching and accommodating Grand Valley's most recent physician assistant class. Both the student and faculty choices for "Preceptor of the Year" awards were general surgeons.

The students chose general surgeon Lisa Price, D.O., at Spectrum Health Big Rapids Hospital. Price set the bar high, expecting students to be "up and running" independently as soon as possible. Students enjoyed the hands-on experience and challenge that she gave them on a daily basis.

Lisa Price, D.O.

Kevin O'Connor, D.O.

The faculty choice for preceptor of the year was general surgeon Kevin O'Connor, D.O., at Spectrum Health United Memorial Hospital in Greenville. O'Connor has been working with students from the program for more than 10 years and is always willing to accommodate students. Students have commented on how welcoming the environment is and how patient the providers are while teaching. One student stated, "This is my favorite rotation yet. The preceptors are amazing people who are willing to teach and help students out during the rotation."

According to department Chair Andrew Booth, "We are truly honored to have such outstanding providers in our community willing to help educate the next generation of physician assistants. With so many outstanding providers to choose from it is always a difficult decision each year as to which provider to honor. We could not produce such high quality graduates without the help of our preceptors. They are an integral part of our program, and we are grateful to have each and every one of them."

Preceptors in an Interprofessional Collaboration

For more than two years, a team of faculty preceptors have been working with Grand Valley health sciences students in an interprofessional collaboration learning experience. At the Grand Valley Family Health Center in downtown Grand Rapids, undergraduate and graduate students from nursing, social work, and movement science have worked with their preceptors to provide a weight management intervention to overweight and obese health center patients and community members. Preceptors Scott Berlin, Ph.D., L.M.S.W.; Phyllis Boone, M.S.N., A.N.P.-B.C.; Kim Fenbert, D.N.P., C.P.N.P.; Lisa Nadziejka, L.M.S.W.; and Sandra Masselink, L.M.S.W. are committed to making each student's experience both challenging and fun.

Scott Berlin, Ph.D.

The preceptors model interprofessional collaboration for students through online modules, case studies, huddles, and coaching. Under the guidance of their preceptors, the students take part in focus groups; explore each other's professions; and examine strengths, biases, and overlapping roles. From these foundational experiences, students quickly become functioning members of the interprofessional team. They see patients, build care plans for patients that integrate unique perspectives and strengths from each profession, and develop projects and presentations for patient education all the while interacting with team members to provide safe, optimal patient care.

This program, entitled Nursing Education, Practice, Quality, and Retention Project, is funded by a grant from the Michigan Department of Community Health (MDCH) through the Health Resources and Services Administration (HRSA).

Phyllis Boone, M.S.N., A.N.P.-B.C.; Lisa Nadziejka, L.M.S.W.; Sandra Masselink, L.M.S.W.; and Kim Fenbert, D.N.P., C.P.N.P.

"I wanted to become a clinical instructor because I love being a part of the growth and development of upcoming clinicians."

— Elisabeth Barrie, C. Weaver Physical Therapy

Physical Therapy Preceptors

Two physical therapists at C. Weaver Physical Therapy, Inc. in East Lansing, MI are regular preceptors for students in the physical therapy program at Grand Valley State University. Elisabeth (Beth) Barrie received her physical therapy degree from Grand Valley in 2007. Since then, she has mentored 12 Grand Valley physical therapy students. When asked about her role as a physical therapy preceptor, Barrie stated, "I wanted to become a clinical instructor because I love being a part of the growth and development of upcoming clinicians. One of the most rewarding things about being a clinical instructor is seeing a student's skills and confidence improve and grow during the time I have with them. The impact a clinical instructor can have and the experience of working with students far outweigh any work that goes along with the job."

Elisabeth (Beth) Barrie

Kristina Greathouse

Kristina Greathouse received her physical therapy degree from Grand Valley in 2003. Since then, she has mentored 10 physical therapy students from Grand Valley. Greathouse reflected on her role saying, "I decided to become a clinical instructor in order to give back to my profession. The best thing about being a clinical instructor is watching the students grow. The clinic I work in is mostly manually based. I love when students come in wanting to do neurologic rehabilitation and at their final evaluation say they really like orthopedics. I know then that I did my job well as a clinical instructor."

Communication Sciences and Disorders Preceptors

The speech-language pathologists (SLP) at Spectrum Healthcare System are committed to supporting clinical education at every level of skill development. These dedicated professionals provide a variety of clinical education opportunities for graduate students enrolled in the communication sciences and disorders (CSD) program at Grand Valley State University. Graduate students are accepted for placements at 11 health care facilities during all semesters and are provided a three-day-per-week supervised practicum or a full-time intensive clinical internship. Students also are offered opportunities to observe and learn at all Spectrum Healthcare facilities. Spectrum speech-language pathologists also support the CSD academic program by providing training and lectures related to medical speech-language pathology.

"The variety of opportunities afforded students by the Spectrum Healthcare SLP team is unique," says Denise Ludwig, Ph.D., associate professor and director of CSD clinical education, "students are taught clinical application of knowledge and skills by working with all age groups and in intensive health care settings."

Preceptor Alexis Kurek (back row, far left) with SLP students at a Spectrum Health facility. (front row) Kelley Bennett and Kaley Gerke, (back row) Alexis Kurek, Michele Renner, Jami Elzinga, Amy Beachum, and Karen Guyski

Alexis Kurek, M.A., CCC-SLP, coordinates clinical placements in speech-language pathology for Spectrum Healthcare. She advocates for strong clinical education experiences. "If we are to advance our profession in an environment that is under increasingly higher scrutiny, then we need to ensure that the services we provide have a strong foundation in evidence-based practice that is effectively implemented, and it is those implementation skills that we hone during a student's placement with us," said Kurek.

Spectrum Healthcare SLPs are motivated to teach graduate students by the desire to develop and strengthen the profession of speech-language pathology through community-based instruction. "It is wonderful to see a student's confidence grow as they become more proficient," reports Kurek.

Grand Valley graduate students have commented on the exceptional clinical education they receive at Spectrum Healthcare facilities. Students recognize and appreciate the teamwork, professionalism, expertise, and caring attitude of Spectrum Healthcare speech-language pathologists.

Grand Valley's Preceptor Perks Program

Supporting Grand Valley students in hospitals and health care facilities both locally and throughout the country, Grand Valley's preceptors fill a special role and deserve a special thank you for the work they do. Preceptors, serving without monetary compensation, are health care professionals who play an essential role as teachers and mentors to students during their clinical rotations. Preceptors not only assist students with acquiring competencies for safe, ethical, and quality patient care, but they also influence the opinions and attitudes students carry throughout their career.

In addition to the rewards inherent in teaching and the personal satisfaction of preparing the next generation of skilled workers, there are professional and personal incentives Grand Valley offers in return for preceptors sharing their invaluable expertise with students. The Preceptor Perks program is specifically designed for Grand Valley preceptors and offers rewards such as a gratis university title, university library privileges, Grand Valley Recreation Center access, and continuing education opportunities to name a few.

In 2015, Grand Valley introduced a new annual award to recognize preceptors, especially those who go above and beyond expectations. Students or faculty may nominate preceptors for this award from each of our health-related programs. Winners of the 2015 awards were recognized at the Midwest Interprofessional Practice, Education, and Research Conference held September 17 and 18, 2015 at Grand Valley State University.

Those interested in serving as preceptors may contact Katie Branch, director of University Clinical Initiatives, at branchka@gvsu.edu.

Spectrum Health speech-language pathologists support clinical education for Grand Valley students.

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.

DeVos Colloquy

Grand Valley State University's Office of the Vice Provost for Health accepted the honor of assuming the transition of leadership for the DeVos Medical Ethics Colloquy for continued interprofessional and interinstitutional education, research, and practice community collaboration. The medical ethics presentations, discussions, and audience participation provide a rich interactive opportunity for the medical community to engage in dialogue on critical ethical topics.

The DeVos Medical Ethics Colloquy is an impressive biannual colloquy series started by the vision and support of Richard and Helen DeVos more than 21 years ago. Their leadership has created a forum for the West Michigan region to discuss subjects of medical and ethical significance guided by a moderator and panel of experts with participation from the medical and lay communities. Luis Tomatis, M.D., F.A.C.S., F.A.C.C., director of medical affairs for the Richard M. DeVos family, has provided the direction for this world-class colloquy series. The proceedings are published in print and in electronic formats for broad dissemination.

Grand Valley has been a central partner in planning, hosting, and supporting the colloquy with participation on the organizing committee from its beginning. Strategically located on the Medical Mile, Grand Valley's Cook-DeVos Center for Health Sciences has served as the venue for the colloquy.

The colloquy presents a forum in which physicians can engage in a conversation with national and international experts in the field, as well as providing an opportunity for the audience to learn more about current and future dilemmas they may face as health care changes. The colloquy strives to provide relevant and ethical solutions that can be implemented in the practice of medicine.

For more information about the colloquy, contact Diane Dykstra at dykstrdi@gvsu.edu.

The prestigious DeVos Medical Ethics Colloquy leadership transitions to Grand Valley.

MIPERC membership represents

140

members from 30 organizations.

Midwest Interprofessional Practice, Education, and Research Center

The Midwest Interprofessional Practice, Education, and Research Center (MIPERC) is a regional, interinstitutional infrastructure, comprised of 140 members and 30 organizations. Founding partners include Grand Valley State University, Grand Rapids Medical Education Partners, and Michigan State University College of Human Medicine. The mission is to identify ways in which partners can infuse interprofessional initiatives across disciplines, learning institutions, and health care systems. Originally founded in 2007 as the West Michigan Interprofessional Education Initiative (WMIPEI) for the greater Grand Rapids area of health educational entities, the initiative has now been renamed to reflect the additional stakeholders from the Midwest United States region. Educational partners from Indiana, Michigan, Nebraska, Ohio, and Wisconsin are all invested in the same goals. These goals include

- integrating interprofessional learning throughout curricula;
- identifying, developing, implementing, and assessing interprofessional clinical experiences for teams of students to practice and learn about, from and with each other; and
- implementing interprofessional scholarship across disciplines and institutions.

The MIPERC profile has become highly visible due to national and statewide contributions. Since 2009, there has been an annual interprofessional conference attracting renowned interprofessional keynote speakers and paper/poster presenters. The conference has served as a forum for "pockets of innovation" to collate their ideas and experiences into demonstration projects.

These demonstration projects and initiatives have become the standard of excellence on which both education and practice can partner. The impetus driving collaborative interprofessional team-based care is patient safety, the Affordable Care Act, and the aging population accessing health care. The changing health care landscape necessitates an evolution into a team-based delivery of care system.

Midwest Interprofessional Practice, Education, and Research Center
Creating Teams for Patient Centered Care

During the academic school year, MIPERC hosts a monthly Lunch and Learn series, inviting leaders in regional interprofessional practice to speak with health care students and professionals. In 2014, an interprofessional education student certificate was developed to facilitate the growth of interprofessional practice skills in students. MIPERC is currently working with a Nurse, Education, Quality and Retention (NEPQR) grant to demonstrate that students and faculty members successfully trained in interprofessional collaborative practice (IPCP) can positively affect obesity-related patient outcomes. Early results of the interprofessional training show increases in IPCP knowledge and decreases in biases toward other professions.

MIPERC is looking forward to continuing its partnerships with the National Center for Interprofessional Practice and Education (public/private entity), demonstrating sustainability as an incubator site, and testing the interprofessional training tools and resources developed by MIPERC members. MIPERC will continue to share this community model on a statewide and national level, as well as seek additional opportunities to explore scholarship and lessons learned.

For more information, visit the MIPERC website at **gvsu.edu/miperc/**.

Second Annual Midwest Interprofessional Practice, Education, and Research Center Health Expo

More than 150 health professional students and faculty members from Grand Valley State University, Michigan State University College of Human Medicine, Ferris State University, and Davenport University volunteered their time and expertise during the second annual Midwest Interprofessional Practice, Education, and Research Center (MIPERC) Health Expo held on Tuesday, March 23, 2015.

Through the efforts of MIPERC's six champion workgroups, the concepts of interprofessional education (IPE) and interprofessional collaborative practice (ICP) are promoted within the region by threading IPE and ICP through health professional curriculum, scholarship, service learning, clinical settings, virtual educational experiences, and crossprofessional practice competencies. The central goal of MIPERC is to foster collaborative, cost effective, patient-centered care in our community. The health expo was organized by the MIPERC service learning workgroup.

The expo was designed so students and faculty members could work in interprofessional teams to present information specific to college students under the expo's theme, Sailing to Good Health. The student teams created topic-specific exhibits with each academic discipline offering information based on their profession's focus. In addition

University President Thomas J. Haas makes a visit to the Grand Valley Health Expo.

to the student exhibits and community vendors, there were four interprofessional presentations during the expo, ranging in topics from public safety to childhood hunger, nutrition, women's health, and fire safety.

The health expo guests were encouraged to visit each health exhibit and obtain a stamp on their Health Expo Passport, which could be submitted upon completion for a chance to win one of the many health expo prize drawings.

Students and faculty members from 12 professional health careers were represented at the expo including allied health, communication sciences and disorders, diagnostic and treatment sciences, human medicine, nursing, occupational therapy, pharmacy, physical therapy, psychology, public health, social work, and therapeutic recreation.

Given the large interest from students, faculty members, and regional community organizations, the MIPERC service learning workgroup is planning to organize and host the next health expo on March 22, 2016, from 5-7 p.m., in the Grand River Room, Russel H. Kirkhof Center on Grand Valley's Allendale Campus. For more information, individuals may contact Katie Branch, director of University Clinical Initiatives for the Office of the Vice Provost for Health, at branchka@gvsu.edu.

Biostatistics Partnership with Spectrum Health Research

How many patients are necessary for an exploratory study of a new treatment intervention? What is the optimal number of heart transplants by a cardiac center? Can exhaled CO_2 concentrations tell us anything about survival after cardiac arrest? These are the kind of questions doctors at Spectrum Health are asking, and students from the professional science master's program in biostatistics are helping them find the answers.

For each of the past seven years, a pair of biostatistics students has served as interns in the Research Department at Spectrum Health. These interns work closely with Spectrum physicians in the design of clinical trials, analysis of data sets, visualization of data, and writing of grants and manuscripts.

A recent study examined the relationship between the number of heart transplants performed by a center in a year and the 5-year survival rate. Centers were divided into three groups: less than 16 transplants per year, 16–30 transplants per year, and more than 30 transplants per year. They determined that centers performing 16–30 transplants per year had significantly higher 5-year survival rates than those performing less than 16, but that performing more than 30 transplants per year did not further increase survival rates.

A second study examined a potential relationship between the concentration of exhaled CO_2 and survival in emergency room patients in cardiac arrest. It was demonstrated that patients with higher exhaled CO_2 concentrations had higher survival rates, and that this measure was clinically useful.

Statistical support of clinical research projects by Grand Valley biostatistics students illustrates how an academic institution can effectively partner with a health care provider to improve patient outcomes, while simultaneously providing students with an experience critical to their future employment. Students practice their statistical skills, learn how to communicate effectively with medical professionals, and see how their work can influence clinical decisions, while clinicians perform studies that lead to advances in evidence-based medicine.

A scribe records the details during a simulation of a patient examination at the direction of Dr. Joshua Kooistra.

Training prepares students with online and classroom instruction, health care experience, and part-time employment.

Scribe Training Program

Grand Valley is offering an education program, at no cost to qualified students, that trains participants to be paid scribes in hospital emergency departments. The Office of the Vice Provost for Health partnered with Emergency Care Specialists of Grand Rapids to offer the free scribe training program four times a year. Scribes work with emergency department providers to document patient care through the use of electronic medical records. Jean Nagelkerk, vice provost for health, said, "students interested in pursuing careers in a health profession program have the opportunity to gain experience in an emergency room documenting in an electronic health record and becoming familiar with medical terminology and clinical problems, diagnostic tests, and medications by completing the scribe program."

The training program consists of three weeks of online and classroom instruction and 40 hours (five eight-hour shifts) of supervised practice in an emergency department. Participants are paid for two of those shifts. Afterwards, participants are expected to commit to a minimum employment term of 18 months, working an average of two eight-hour shifts per week.

A student must be an area college sophomore, junior, or senior student enrolled or interested in pursuing a health care career, or an individual who has recently obtained a college degree in a health- or science-related field. A grade point average of 2.5 or higher is required, and students are expected to have a working knowledge of basic medical terminology. For acceptance to the program, students are tested on their typing skills and knowledge of medical terminology.

Josh Kooistra of Emergency Care Specialists said, "Demand for this position has increased as health systems have begun implementing electronic medical records and as health care providers strive to increase their focus on interacting with their patients versus their computers." The first cohort of the training program began May 1, 2015. For more information, contact program director Jeff Trytko, director of the scribe program, at trytkoj@gvsu.edu.

10th Annual Conference on Aging

The conference provided an opportunity for students to discuss the results of their research on aging topics with conference attendees.

The Grand Valley State University Art and Science of Aging Conference is an annual educational event dedicated to broadening the dialogue on aging in West Michigan. This forum enables professionals and community members to gain new evidence-based knowledge and skills on healthy aging. In addition, it showcases important local resources and strategies for optimizing the later life trajectory. For each of the past four years, the conference has attracted more than 250 community members, a mix of health and aging services professionals, and a large number of older adults.

The theme of the 10th Annual Art and Science of Aging Conference held in February of 2015 was Life Balance: Keep Moving Forward in the Third Age. The keynote speaker was Ashton Applewhite, author and blogger at *This Chair Rocks*. Applewhite is the first woman to have four books on the *New York Times* best-seller list. Her presentation, titled *This Chair Rocks: How Ageism Warps Our View of Long Life,* was a great hit with the 250 attendees, building an understanding of the ageism that permeates our culture. This year, there were 17 one-hour workshops taught by professors and professionals in the field. The closing session featured AARP's new program called Life Reimagined, engaging participants in a lively and experiential learning activity.

In addition to the keynote speaker and workshops, the conference provided an opportunity for students to discuss the results of their research on aging topics with the conference attendees. This year 10 students presented their research — five undergraduate and five graduate.

The conference was held in the Grand Valley Richard M. DeVos Center, in the Hager-Lubbers Exhibition Hall, Charles W. Loosemore Auditorium, and adjacent spaces and classrooms. Participants enjoyed

Keynote speaker was Ashton Applewhite, author and blogger at *This Chair Rocks*.

opportunities for networking and learning. Information and resource display tables were provided by a select number of community organizations known for their valuable educational resources for older adults.

The conference planning committee includes faculty members, staff members, and student volunteers from Grand Valley and professionals from many community organizations that serve older adults. These have included Area Agency on Aging of Western Michigan, AARP Michigan, Advocates for Senior Issues, Holland Home, Senior Neighbors, Forest Hills Senior Programs, Greater Grand Rapids End of Life Coalition, Covenant Village Retirement Community, and Beacon Hill Grand Rapids. The Geriatric Education Center of Michigan provided a small grant and staff to support the conference.

The Art and Science of Aging Conference maintains a website at: **gvsu.edu/gerontology**.

Moving Education into the 21st Century: Creating Activity-permissible Classrooms

Faculty members from the Department of Movement Science at Grand Valley State University, working cooperatively with teachers and support personnel from Mary A. White Elementary School in Grand Haven, MI, research and support personnel from Steelcase Education, and staff members from Custer Office Furniture, collaborated to create an activity-permissible classroom for the Grand Haven Public Schools. John Kilbourne, Grand Valley professor of movement science, led the team that created the active teaching and learning environment, and then researched student engagement in the redesigned classroom.

The research question asked, "Would an evidence-based designed spatial solution impact student engagement and movement behaviors in a fourth-grade classroom?" The activity-permissible classroom included Steelcase Verb™ Tables and White Boards, Steelcase Node™ seating, and Steelcase Buoy™ seating products along with a redesign of the room setting.

The results from the survey data indicated that students perceive themselves in the redesigned classroom as having greater focus, being more involved, having the ability to be involved in different learning activities, being more engaged in different learning activities, having more opportunities for group work, and having more opportunities for feedback from the teacher and other students. The students also felt that they would receive better grades, and that they had greater motivation to attend class.

The qualitative analysis of classroom observations and photographs affirmed and expanded upon the results from the survey data. The new classroom environment enhanced significantly the students' choices and provided a sense of ownership and empowerment. It also enhanced the capabilities for movement, both on the micro-level (swivel seats) and the macro-level (total classroom reconfiguration). Additionally, the activity-permissible classroom created an environment that was managed effectively by both the teacher and students, including the efficient use of classroom time.

Education professionals can help make classroom experiences more activity-permissible thus providing additional opportunities for the promotion of more engaged students. One path to this future is to use university expertise to help schools move toward more active classrooms and to continue assessing their effectiveness.

Movement Science faculty-student research affirms positive impact of activity-permissible classroom in Grand Haven elementary school.

Shari Bartz-Smith, a Grand Valley faculty member, prepares for one of the many events organized by the West Michigan Youth Sports Safety Coalition.

West Michigan Youth Sports Safety Coalition

In October of 2013, the West Michigan Youth Sports Safety Coalition was formed as an interprofessional association comprised of primary care physicians, physician liaisons, trauma nurses, occupational therapists, athletic trainers, injury prevention specialists, managers, and professors. Organizations represented in the coalition include Grand Rapids Parks and Recreation, Ottawa/Kent Athletic Conference, Mary Free Bed Rehabilitation Hospital, Metro Health Sports Medicine, Spectrum Health Sports Medicine, Grand Valley State University, and Helen DeVos Children's Hospital. Each partner has a vested interest in sports injury prevention.

The program's goals include prevention of sports injuries in youth athletes, education of youth sports coaches in prevention of sports injuries, increasing athletes' self-awareness about sports injuries, education of parents of youth athletes on prevention of sports injuries, and increased awareness about local resources for athletes who suffer sports injuries.

In year one of its existence, the coalition focused their message on prevention of concussions and heat illnesses. Since then, the organization has connected with more than 1,000 student athletes, coaches, and parents at several events including the GVSU National Girls and Women in Sports Day event, GVSU Summer Health Activities and Professions Exploration (sHaPe) camp, Grand Rapids Public Schools coaches professional development program, Healthy Lifestyles Fair – Grand Rapids Griffins, and the Pediatric Care Symposium.

The coalition has delivered public service announcements through Clear Channel Radio, been featured on the Maranda television show and WGVU Morning Show with Shelley Irwin, and received a grant from Safe Kids to help support the activities of the coalition. For additional information, contact Dr. Shari Bartz-Smith at bartzs@gvsu.edu or Jennifer Hoekstra at Jennifer.Hoekstra@helendevoschildrens.org.

Rebecca Davis, Ph.D., RN, speaks to the audience at the *Your Health Lecture Series* about the challenges of living with Alzheimers.

Your Health Lecture Series

Each year, Grand Valley State University's Office of the Vice Provost for Health partners with Michigan State University College of Human Medicine and Spectrum Health in presenting the *Your Health Lecture Series*. This series provides students, faculty members, staff members, and local community members with valuable, relevant, health-related information and strives to ensure attendees leave with a greater knowledge of the topics as well as useful tips and resources.

Alzheimer's Disease: Understanding and Treating Dementia proved to be an important topic for the community. The lecture was held in November 2014 at Grand Valley State University's Cook-DeVos Center for Health Sciences. With an attendance of more than 200 people, panelists were able to reach the lives of many of those affected by Alzheimer's disease.

Timothy Thoits, neurologist at the Spectrum Health Medical Group and clinical associate professor at MSU-CHM, began the evening by defining dementia, explaining the Alzheimer's disease diagnosis, and shedding light on current research. Rebecca Davis, associate professor at Grand Valley, followed Thoits by covering health promotion after a dementia diagnosis and offered participants an opportunity to participate in an ongoing research study. Immediately after the presentations, audience members were given the opportunity to ask questions and voice concerns, receiving direct responses from the panelists.

Additional facets of Alzheimer's will be discussed at the next *Your Health Lecture Series* on Thursday, November 12, 2015, at 7 p.m., in room 119 of Grand Valley's Cook-DeVos Center for Health Sciences. The events are free and open to the public.

LoWellness Health Assessment

The Master of Public Health (M.P.H.) degree program and the LoWellness Health Assessment project have partnered on a community-based event. LoWellness is a grant-funded program initiated by Jody Seese, community member and tobacco prevention specialist, and focused on conducting health assessments of 14,000 residents living in Lowell, MI.

Grand Valley public health students worked on the project as advisory board members and volunteers for the development and pilot of a health assessment survey during the planning process. During the winter of 2015, M.P.H. students in the social campaigning and distribution class took the lead on creating marketing tools and a social media campaign in preparation for the survey launch.

The kickoff event for the Lowell community was held in March at the Lowell Health Expo. The goal was to obtain 3,000 completed health surveys by the end of the summer. Grand Valley's president, Thomas J. Haas, was present at the kickoff to endorse the partnership along with Paul Brand, president of the Alliance for Health. The event marked the official launch of the survey to the community and served as a significant service-learning opportunity for the M.P.H. graduate students.

Guatemala: An International, Interprofessional Service Learning Experience

Hearts in Motion (HIM) is an organization providing rehabilitative treatment for people globally. Faculty members from Grand Valley's Physical Therapy (PT) Department have traveled to Guatemala through HIM for seven years. Barbara Baker, P.T., has led the trip and collaborated with Grand Valley's Occupational Therapy (OT) program, led by Grand Valley OT faculty members Denise Meier and Susan Cleghorn.

The purpose of this experience is to provide an international/interprofessional service learning experiences for Grand Valley OT and PT students, while expanding knowledge of social justice for marginalized populations. Additionally, the experience is intended to effect change on individuals served in Guatemala through improved quality of life and well-being.

Grand Valley PT student Tamara Kas and OT student Richele Ehardt work with a patient in a rural clinic in Guatamala.

In recent trips, these purposes were met as the students worked together in varied rehabilitation settings. A woman came into a rural clinic in a wheelchair. Once evaluated, she was given a brace for her ankle and a walker and was able to walk out of the clinic. Another gentleman carried his wife, who had a stroke, four miles through the mountains to get to the clinic. At the clinic, he was shown how to help his wife move her arm and leg and was put on a waiting list for a wheelchair. One 10-year-old child, who had never received rehab services, was unable to walk or crawl because of severe leg deformities and was covered with sores. At the clinic, a mobility device similar to a skateboard was devised that he was able to propel with two small crutches.

All these experiences were summed up by one student, "One thing that impacted me on the PT/OT service trip to Guatemala was how genuinely grateful each patient was for our time and knowledge regarding their health issues. People came from near and far, often overcoming transportation difficulties and sacrificing comfort along the journey, to patiently wait in line to be seen. The smiles on their faces when they received a better fitting pair of shoes, a wheelchair, or a piece of advice were priceless. Roughly translated from Spanish to English, one elderly male patient expressed his gratitude poignantly: 'I may not be able to pay you with money, but you and your families will be blessed throughout life. Thank you.'"

Educators, practitioners, and students from the Midwest region participated in the 2014 MIPERC conference held at Grand Valley's Loosemore Auditorium.

2014 MIPERC Conference

The 7th Annual Interprofessional Education, Practice, and Research Conference was held at Grand Valley State University's Loosemore Auditorium in September, 2014. The conference is presented each year by the Midwest Interprofessional Practice, Education, and Research Center (MIPERC), an organization founded by Grand Valley State University, Grand Rapids Medical Education Partners, and Michigan State University – College of Human Medicine. The event offers participants opportunities to network, share experiences, and learn how others are integrating interprofessional education and collaborative practice into education and health care services, and through applied research. The theme of this year's conference was Best Practices and Innovations in Interprofessional Practice, Education, and Research.

The conference included nationally known speakers who serve as champions for interprofessional education and practice. The 2014 conference speakers included Roger W. Spoelman, president and CEO of Mercy Health West Michigan Region; Amy Barton, PhD, MSN, FAAN, associate dean for Clinical and Community Affairs at the University of Colorado—Denver; Barbara Brandt, Ph.D., director of the National Center for Interprofessional Practice and Education; and Scott Shipman, M.D., M.P.H., director of primary care affairs and workforce analysis at the Association of the Center for Integrative Medicine.

The conference also included 21 theme-related podium presentations from health care educators and professionals. The presenters represented institutions including Elsevier Clinical Solutions, Grand Valley State University, Madonna University, the Michigan Health Council, Purdue University, Texas A&M University, and the University of Michigan. Complementing the speaker schedule was a panel discussion including representatives from Spectrum Health Center for Integrative Medicine. Approximately 220 people attended the conference.

The practice of interprofessional education in health care promotes the core competencies of crossdisciplinary communication, roles and responsibilities, teamwork and team-based care, as well as values and ethics. Ultimately, these core competencies facilitate the foundation for better health, quality care, and decreased health care costs.

For more information about upcoming conferences and sponsor opportunities, contact Diane Dykstra at dykstrdi@gvsu.edu.

Grand Valley student Austin Hunt works on a neighborhood project while assisting the community of Bayou La Batre, AL, in its continued recovery from Hurricane Katrina.

Public Administration Service Learning in Alabama

For many college students, spring break is a time of rest from winter semester classes. For 17 students in the School of Public and Nonprofit Administration's service learning class (PA 380), the week offered the opportunity to volunteer their time to assist the southern Alabama community of Bayou La Batre. The group was also accompanied by eight students from Students Leaving a Mark (SLAM), which is an undergraduate student organization dedicated to providing its membership with academic, cultural, and social opportunities to enrich the students' professional leadership potential in the field of civic engagement and nonprofit management. The team was led by Quincy Williams, undergraduate program coordinator; Anne London, senior academic advisor, College of Community and Public Service Undergraduate Advising Center; and Leijhi Koval, program advisor from Disability Support Services.

While New Orleans garnered most of the national attention with Hurricane Katrina, the small rural community of Bayou La Batre was also impacted significantly. According to the National Weather Service Forecast Office of Mobile, AL, the storm surge was as high as 12–14 feet in Bayou La Batre, and was likely closer to 20 feet immediately along the Mississippi-Alabama border. Many homes were completely engulfed by Katrina's surge in Bayou La Batre.[1]

Although it has been 10 years since Hurricane Katrina hit Bayou La Batre, the traumatic impact is still evident throughout the community. The economy suffered greatly as the town worked to rebuild from the disaster. Less evident, however, were the invisible wounds of the community. These invisible wounds included loss of employment, security, and repercussions due to the changing economy.

According to student Alex Brizard, "The reason we chose to come here is because they didn't get the same attention as some of the other places did. New Orleans received a lot of coverage, but Bayou La Batre was hit pretty hard too." Brizard and the other students had the opportunity to speak with survivors from Hurricane Katrina and work side by side with local residents while painting, rebuilding wheelchair ramps, fixing and building back porches, and cleaning debris from lawns. While assisting citizens in the neighborhoods, students had the opportunity to draw upon

[1] Medlin, J., R. Ball, and G. Beeler. 2005. Extremely Powerful Hurricane Katrina Leaves a Historic Mark on the Northern Gulf Coast. Mobile/Pensacola National Weather Service Forecast Office. http://www.srh.noaa.gov/mob/0805katrina (accessed May 7, 2015).

efforts to combine education with high impact experiences. Student Jennifer Lewis comments, "Although I have worked with and volunteered at local nonprofits in Grand Rapids, this trip gave me the opportunity to work with and learn from multiple nonprofits, both local and national, in a different community and culture."

Injury Care Clinic

Grand Valley State University's Injury Care Clinic (ICC) first opened in January, 2014. The initiative was the result of several years of collaborative planning spearheaded by Shari Bartz-Smith, professor of movement science and program director of athletic training, and Amy Campbell, associate director of campus recreation. The purpose of the clinic is to provide basic first aid, injury evaluation, acute injury care, basic rehabilitation, preventative techniques including taping and stretching, and professional referrals.

The target populations are members of the previously underserved Grand Valley community including club sport athletes, intramural athletes, recreation center users, and the general student body. In addition, the clinic has extended its services to Grand Valley faculty members, staff members, and the local community. Prior to the opening of the clinic, the only populations with access to the services of athletic trainers were varsity athletes. The collaborative partners of the clinic include Metro Health, Grand Valley Campus Recreation Department, Grand Valley Student Life Office, and Grand Valley Movement Science Department.

In the first semester the clinic was open (Winter 2014), there were 423 patient visits and 660 in the second semester (Fall 2014). The clinic is staffed by Grand Valley alumnus Ethan Cunningham, ATC, and is open afternoons, Monday through Thursday. For more information, go to **gvsu.edu/icc** or contact Ethan at injurycc@gvsu.edu.

Key community organizations partner to raise awareness of sports injury prevention.

The Injury Care Clinic at Grand Valley has extended its services to include university faculty and staff members, as well as local community members.

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.

Biomarker Research of Parkinson's Disease

Grand Valley State University Distinguished Associate Professor of Molecular Genomics, Sok Kean Khoo, Ph.D., from the Department of Cell and Molecular Biology, received a grant from the Michael J. Fox Foundation for Parkinson's Research to evaluate Parkinson's disease-related molecular biomarkers. The research project titled *Circulating microRNAs: A New Paradigm for Parkinson's Disease Biomarker Discovery,* also involves collaborators from the University of Colorado Anschutz Medical Campus and the University of Rochester.

Parkinson's disease (PD) is the second most common neurodegenerative disorder, affecting approximately one million Americans and five million people worldwide. The current gold-standard for diagnosing PD is based primarily on clinical observation of motor dysfunction. PD-related motor symptoms are subtle, and by the time of diagnosis, it is believed that neurodegeneration has already reached a fairly advanced stage. Therefore, one of the key challenges in management of PD is the lack of definitive diagnostic tools to enable early detection of and intervention with this incurable disease.

Professor Khoo studies biomarkers for Parkinson's disease supported by a Michael J. Fox Foundation grant.

Distinguished Associate Professor of Molecular Genomics, Sok Kean Khoo, Ph.D.

MicroRNAs (miRNAs) are small, noncoding RNA molecules that are involved in various biological and pathological processes. Studies have showed that miRNAs can be detected in various biological fluids to reflect pathological status of various human diseases. The investigators' previous proof-of-concept study in collaboration with Mercy Health Hauenstein Neuroscience Center demonstrated that a panel of circulating miRNAs in plasma can differentiate PD patients from health controls and served as potential diagnostic biomarkers for PD. The current study will investigate whether these PD-related biomarkers can be used to track disease progression. The miRNA expression of plasma from base line (first diagnosed) and end points (six months to two years after first diagnosed) is compared, as well as slow vs. fast progressors. This study will define circulating miRNAs as progression biomarkers to monitor disease development at an early stage.

Distance Learning Program

Physician Assistant Studies Director Andrew Booth, PA-C, and Professor Theresa Bacon-Baguley, Ph.D., have been awarded a Health and Research Services Administration (HRSA) grant entitled *The Effects of a Distance Learning Program in Physician Assistant Studies on the Number of Graduates Choosing to Work in Primary Care*. The purpose of the grant is to develop and implement the delivery of the program's curriculum in Northern Lower Michigan.

There is a strong relationship between a student's rural background and subsequent intention to train and work in a rural area. By delivering the program through a distant learning format, students will be able to remain within their communities during their didactic and clerkship components and eventually become an integral part in the delivery of health care in their communities. The first cohort of students began this program in Traverse City in Fall 2015.

Health Check

The West Michigan health care sector is experiencing significant changes, while continuing to be a vital and growing part of the West Michigan economy. Two major challenges are the reduction of health care costs and the implementation of the Affordable Care Act (ACA). Health Check is presented each January at the West Michigan Economic Healthcare Forecast event held at Grand Valley's Eberhard Center on the Robert C. Pew Grand Rapids Campus. Health Check is an initiative of the Office of the Vice Provost for Health and includes an annual symposium and publication focused on the health trends, health care issues, and other timely analyses of the health status of Western Michigan. Health Check provides an ongoing trend analysis of three major foci: knowledge foundations, health care trends, and economic analysis. In the 2015 report, the knowledge foundations section highlighted continuing shortages of workers for select high-skilled health sector occupations, but not in lower-skilled health sector jobs. The health care trends section summarized Michigan behavioral risk factor data and concluded that a large number of people in West Michigan are still choosing unhealthy lifestyles. Finally, the economic analysis section showed that the cost structure continues to grow and compares these cost markers with other cities.

The study has been under the direction of Paul Isely, Ph.D., associate dean for undergraduate programs and budget in the Seidman College of Business. Joining him in the work this year were Seidman College of Business economics faculty members Kevin Callison, Ph.D.; Sonia Dalmia, Ph.D.; and Leslie Muller, Ph.D., with the support of graduate assistant Kathleen Pedres. Data for the study was provided by Blue Care Network, Blue Cross Blue Shield of Michigan, and Priority Health. Callison, whose main research interests include health economics and applied econometrics, will lead the study for the 2016 report.

The Health Check Study informs health care policy and community decisions about types of health care professionals, services, and delivery systems that could best serve the community.

Economics Professor Paul Isely presents results of a study on health care trends at the 2015 Economic Healthcare Forecast event.

Regenerative Medicine

Physician assistant studies Assistant Professor David L. Geenen, Ph.D., has been awarded a Faculty Grant-in-Aid from the Center for Scholarly and Creative Excellence entitled *The Role of Gap Junctions on Stem Cell Retention Following Myocardial Ischemia/Reperfusion*. Stem cell therapy has been shown to improve heart function following cardiac injury due to a heart attack. Despite these beneficial effects, a significant loss of these therapeutic cells occurs in the first 24 hours after they have been injected into the heart. The objectives of his study are to determine the mechanism for this loss and to improve retention of the stem cells in the murine heart.

Diabetes Research Grant

The Blue Cross Blue Shield of Michigan Foundation and the Robert Wood Johnson Foundation have awarded combined grants of $175,900 to Grand Valley State University's Office of the Vice Provost for Health for a project titled *Improving Outcomes in Adults with Diabetes through an Interprofessional Practice and Education Program.* On behalf of promoting the Midwest Interprofessional Practice, Education, and Research Center's (MIPERC) interprofessional collaborative practice (IPCP) care model, research outcomes focus on the Institute for Healthcare's Triple Aim of improving the patient experience of care, improving the health of populations, and reducing the per capita cost of health care.

The MIPERC model has been implemented at Cherry Health Center, Michigan's largest federally qualified health center. Grand Valley State University, Michigan State University College of Human Medicine, and Ferris State University College of Pharmacy, along with Cherry Health, have collaborated to establish a team of health professionals and health profession students, consisting of physician assistant, medical, and pharmacy students, who work together to improve health outcomes for patients.

A MIPERC team conducted interprofessional and collaborative practice (IPCP) training for the Cherry Health staff members and the students. In a traditional clinical placement, students work under the guidance of a preceptor to assist in providing care to patients with diabetes mellitus. As part of

Cherry Health Center physician, Dr. Grace Eugenio (foreground), works with physician assistant student, Holly Miller White.

their rotation, students conduct patient visits, assist staff nurses in responding to patient phone calls, lead patient group diabetic education sessions, participate in daily team huddles, assist in collaborative care planning, present weekly student team case presentations, and conduct medication reconciliations.

The evaluation component of the study focuses on staff and patient satisfaction, select patient outcomes, and clinical productivity (cost and access variables). Staff and student evaluation measures include scores on the Interprofessional Perception Scale and the Entry Level Interprofessional Questionnaire tools, program evaluations, and IPCP pre- and post-tests on training modules. Students also complete a reflective questionnaire at the completion of their clinical rotations. Monthly focus groups with students, providers, and staff members provide rich data to improve efficiencies in the IPCP care process.

Measured clinical outcomes will include those related to the Healthy People 2020 objectives with changes from baseline in BMI, Hemoglobin A1c, and LDL laboratory tests, and prevalence of eye, foot, and dental exams as the foci. Other measures will include trends in the number of patient visits by provider, and examination of patient and health care worker satisfaction.

The Affordable Care Act and Small Businesses

Economics Assistant Professor Leslie Muller, Ph.D., in collaboration with health insurance company Priority Health, conducted a survey of West Michigan small businesses (less than 50 full-time employees) to determine how they may be changing their health insurance offerings in light of the Affordable Care Act. Last year Muller surveyed larger businesses and found that the vast majority were going to continue to offer health insurance to their employees. This year's results with small businesses were quite different.

Small businesses have traditionally paid more for health insurance than their larger counterparts. It is not surprising then that only 25 percent of surveyed firms who were offering coverage in 2013 planned on continuing that coverage through 2016. Of those who are not offering coverage, about two-thirds were going to encourage their workers to seek coverage on the public health insurance exchange.

Economics Assistant Professor Leslie Muller discusses reactions of small businesses to the Affordable Care Act.

ALUMNI HIGHLIGHTS

Grand Valley alumnae have topped the 100,000 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.

Joanne Urbanski, '84 and '94, President and CEO, South Haven Health System

Joanne Urbanski knew she wanted to be a nurse from the time she was eight-years-old. "It was more of a vocation than a profession at that time," she said, "and I wanted to take care of people." When it came time for college, she chose Grand Valley for its reputation and convenient location. After graduating with her B.S.N. degree, she began her nursing career at Blodgett Hospital in Grand Rapids, MI, and then went to work in the medical-surgical and critical care unit at South Haven Hospital. After she had twins, a boy and a girl, Urbanski somehow found time to return to Grand Valley to earn her M.S.N. in 1994. Looking back, Urbanski notes that, in spite of her childhood dreams, she only worked in bedside nursing for 18 months, moving into management early in her career.

Joanne Urbanski, '84 and '94

"... the one thing that hasn't changed is that the patient has remained the focal point. Grand Valley has that in their mission and vision and that was driven home with me and has stayed with me."

More than 30 years later, Urbanski is still in South Haven, except now she is president and CEO of South Haven Health System, a role she has had held since 2006. "I think it is a little unusual that you stay in an organization that long and are able to move into that position," she said, "so I feel very fortunate." She credits her clinical background as being critical to her success; especially in the way it allows her to relate to medical staff. They know that you have taken care of patients, that you speak the same language, that you've been there and done that," she said. "That has gone a long way to strengthen those relationships."

Urbanski knows that, while changes in today's health care industry will keep her on her toes for quite some time, her Grand Valley education has prepared her well to meet the challenges. "Health care is going through a significant amount of change," she said, "but the one thing that hasn't changed is that the patient has remained the focal point. Grand Valley has that in their mission and vision and that was driven home with me and has stayed with me."

Urbanski's passion for health care is shared by her son, who is an RN in Grand Rapids and currently a student in Grand Valley's Doctorate of Nursing Practice (D.N.P.) program, and her daughter who works in the practice management side of health care at Rush Hospital in Chicago. Urbanski stays connected to Grand Valley through her son and by serving on the Vice Provost for Health's Advisory Board. She also considers returning to Grand Valley to teach one day, or possibly for a doctoral degree.

Ginger Biesbrock, '93 and '98, VP-Consulting, MedAxiom Consulting

It didn't take long after graduating as a part of Grand Valley's pioneer class in the Master of Physician Assistant Studies (M.P.A.S.) program for Ginger Biesbrock's career in health care to get rolling. "I walked away as a new graduate with four job offers," said the 1998 graduate. "So much of that was because of the clinical experience Grand Valley provided. I was so well prepared that both of the organizations in which I had clinical experiences offered me jobs." She chose a physician assistant (PA) position in internal medicine at what was then Butterworth Hospital in Grand Rapids, MI, and she hasn't slowed down since.

She went on to serve as director of operations at West Michigan Heart, chief operating officer at the Cardiovascular Group at Centra Health, and she has even been back to Grand Valley to teach as an assistant professor. Today, Biesbrock is vice president-consulting for MedAxion Consulting, a member organization of more than 6,000 physicians. Her focus is on Advanced Practice Provider (APP) utilization care team development, patient transitions, and chronic disease management programs.

"As a clinically practicing PA, my goal was always to make sure the patient in front of me was the most important thing I had to do at that moment," she said. "Now my reward is helping practices create structures that allow their PAs to work to the top of their licensure and create a collaborative, team-based approach so that multiple patients get that high level of care."

Ginger Biesbrock, '93 and '98

"I was so well prepared that both of the organizations in which I had clinical experiences offered me jobs."

Though Biesbrock entered the Grand Valley M.P.A.S. program in its first year, she didn't have any doubt about the quality of education she'd receive. "I knew what Grand Valley would offer based on my undergraduate experience," she said. Biesbrock earned her bachelor's degree in health sciences from Grand Valley in 1993. "I was passionate about wanting to be a PA and, when I found out it was being offered at Grand Valley, that was a good thing."

As an active board member of the Michigan Academy of Physician Assistants, Biesbrock continues to elevate the profession through her work there. In 2001, Biesbrock started regular lectureship teaching at Grand Valley. "It was an opportunity for me to give back to the profession and give back to the university," she said. "I love to teach, and it felt like an opportunity for me to prepare future PAs because I knew that eventually they'd probably be taking care of my family members."

Whether she's teaching college students or consulting with physicians, Biesbrock understands that it's all about making sure physician assistants are supporting the bigger health care team. "Why do all of us on that team work to the top of our licensure?" she asks. "Because when we are doing that, our patients are getting their needs met, the physicians are more satisfied, and the administrators are more satisfied. It's really about educating them on what we are, what we do, and creating a structure that will allow that to happen."

Michael Breon, '12, Director of Process Improvement, Spectrum Health

When Michael Breon moved to Grand Rapids, MI, in 2009 for a job in marketing and communications at Spectrum Health's Continuing Care group, he learned about a significant knowledge gap he'd need to close in order to be successful in the health care industry. To close it, he decided to return to school for his Master of Health Administration degree, and Grand Valley quickly rose to the top of the list of options. "Grand Valley stood out because of the flexibility of being able to work full time and still be able to attend classes at night," he said. "Looking at relevant case load, looking at reputation — all those things really pointed to Grand Valley, so for me it was a pretty easy decision."

He graduated in 2012 and soon discovered a passion for process improvement. Today, Breon is director of process improvement at Spectrum Health where he works with the organization's seven regional hospitals and postacute services to identify and implement efficiency improvements. "Process improvement gave me an opportunity to make the lives of people that affect our patient's lives better," he said. "Better in that they can be more efficient, and they can be safer. For me, if I can't be the person performing the surgery, then I can at least help the surgeons be the best at what they do."

Michael Breon, '12

"Grand Valley stood out because of the flexibility of being able to work full time and still be able to attend classes at night."

In one case, Breon said the process improvement team was able to help a Spectrum Health clinic go from seeing eight to 32 patients a day by attacking waste, finding efficiencies, and utilizing human resources. Results aren't always so dramatic, but sustaining improvement really matters, especially in such a large organization. "We do work all over our system, whether it's our emergency department, our clinics, or our regional hospitals," he said. "We tackle big problems in a lot of different areas, always looking to improve."

Breon was a problem solver while a student at Grand Valley also. "I noticed there was a lack of student organizations at the graduate level," he said, "and it's so important to network and learn from your peers, not just in a classroom, but outside the classroom, as well." So he and a few colleagues started the Health Care Professionals Graduate Student Alliance. "I think my proudest achievement through Grand Valley is the formation of that group and not just to see it continue, but to see how it's grown over the last couple years is really exciting."

Likewise, it's the deep-rooted sense of helping people that gives Breon professional satisfaction. "There are so many different aspects of the health care system," he said, "and we touch people in so many different ways that, if you don't have that underlying need to want to help somebody, I don't know how you can stay motivated in this industry."

Donald Condit, '07, Division Chief of Orthopedics, Spectrum Health Medical Group

In today's complex health care environment, being a surgeon often means operating a business as well as operating on people. "Health care right now is a very dynamic and ever-changing field," said Donald Condit, a Grand Rapids-based orthopedic surgeon specializing in hand surgery. "There's a real need for physician leadership. The business skills taught at Grand Valley's Seidman College of Business are a very helpful adjunct to medical training for those interested in leadership."

Adding those skills to his medical satchel was the reason Condit returned to college at the Seidman College of Business nearly 20 years after earning his M.D. at the University of Michigan. Condit received his M.B.A. from Grand Valley in 2007.

Donald Condit, '07

"There is budgeting, business law, planning, marketing, ongoing operations management, and it's all very important. These are not part of the medical school or residency curriculum."

"I was involved with running a private practice for 25 years, and I'm now in a leadership role," said Condit, who is division chief of orthopedics in the Department of Musculoskeletal Sciences at the Spectrum Health Medical Group. "We're currently planning a new hand center with six to eight surgeons, teams of therapists, nurses, medical assistants, and physician assistants all working together. To have the skill set and knowledge base I acquired at Seidman is very helpful. There is budgeting, business law, planning, marketing, ongoing operations management, and it's all very important. These are not part of the medical school or residency curriculum."

Condit chose a Seidman M.B.A. for a number of reasons. "The Seidman College of Business has a great reputation," he said. "It has outstanding faculty members. We had students from many different career paths enriching each other's educational experience. I was able to study here in Grand Rapids and not leave my family for weekends or weeks at a time and continued my practice. It had the flexibility that I could stretch things out over a few years. For all those reasons, it was a very good fit."

While Condit is grateful for his Seidman graduate experience, he also is quick to praise the university as a whole. "My experience at Grand Valley is very positive," said Condit, whose academic pedigree includes a bachelor's degree from the University of Notre Dame. "I took a number of prerequisites at Grand Valley that weren't a part of my premedical undergraduate education, so I overlapped with some undergraduates and found there to be a high quality of students, and the professors were fantastic."

Though the duties of doctors have expanded over the years, Condit's greatest motivation is still his patients. "Being a hand surgeon is a fascinating specialty," he said, "and to be able to help a patient is very special."

Ruthann Brintnall, '85, Associate Professor of Nursing, Kirkhof College of Nursing, Grand Valley State University

Having been part of the faculty at Grand Valley State University's Kirkhof College of Nursing since 1983 has given Ruthann Brintnall a perspective not many others can claim. So, when she speaks of the university being a gift to her, one might be tempted to ask if it really isn't the other way around.

"I have watched Grand Valley grow and develop as a university, and I have been able to develop with that — what an absolute gift," said Brintnall, who also earned her master's in nursing (M.S.N.) from Grand Valley.

Those ideas have led to the growth of the college and the development of new programs over the years, including the Doctorate of Nursing Practice (D.N.P.), in which Brintnall did significant teaching. The D.N.P. is not the first nursing program Brintnall has helped develop at Grand Valley; her M.S.N. class of 1985 was the first to complete that program as well.

Ruthann Brintnall, '85

"I have watched Grand Valley grow, and that has been a gift."

"I was blessed to be part of that first cohort," she notes. "It was part of what became a really long association with Grand Valley. I really believe that Grand Valley has something special and something unique. We offer students something that is unparalleled anywhere else." She recalled conversations with other students during her doctoral studies at Rush University in Chicago. "One of the things they said to me was, 'Ruthann, are there any more like you at home?' and I said 'We have 22,000 just like me at Grand Valley.' It's not me. It's

the environment. It's the community. It's our philosophy," she said.

"Grand Valley gave me the potential to learn more in my role as a nurse," said Brintnall, who was recipient of the Outstanding Educator Award from the Grand Valley Alumni Association in 1999. "Grand Valley gave me the insight and confidence to be a self-learner and to use my skills to direct my own learning. Obviously, in the past 35 years things have changed, but they gave me the confidence to say 'You can do this.'"

Indeed, Brintnall did it. And she did it with dignity and class and humility, always redirecting credit away from herself and back to the university. "Grand Valley reflects the things I value, which are good education, direction, being your best self, all of those things. We aren't a tiny little place anymore; we can compete with the best. We have a university full of potential."

Lisa Rose, '95 and '97, Service Line Leader for Orthopedics, Neurosurgery, and Rehabilitation; Senior Leadership Team Member, Mercy Health Muskegon

Is leadership contagious or does it come from hard work and desire? It may be a little of both for Lisa Rose, who transferred to Grand Valley as an undergrad and then went on to earn her master's degree in physical therapy in 1997.

Since then, Rose has risen through the ranks of Mercy Health Muskegon, currently serving as service line leader for orthopedics, neurosurgery, and rehabilitation and as a member of the hospital's senior leadership team.

She started with a position as a physical therapist on the medical-surgical units at what was then Mercy General Health Partners. She also had the advantage of working with and for another Grand Valley alumnus, which is where the question of contagious leadership originates. "I have a great mentor in our current hospital President Greg Loomis," said Rose. "I've been blessed to report to him ever since I've been a director. He's amazing. He basically raised me and taught me how to be a leader."

Lisa Rose, '95 and '97

Even if leadership is not communicable, Rose recognizes that one's experiences and the people one works with rub off. "It's been quite a continuum working originally as a physical therapist in the place I work now as a leader," she said. "It really gives me good perspective on what it means to be a front line colleague in the organization and give direct patient care. It also helped me build a lot of relationships within the hospital and organization and understand really how the hospital runs from a front line perspective every day."

Rose credits her Grand Valley's liberal education foundation with giving her the skill set necessary to grow in her career beyond physical therapy. "Grand Valley prepared me with skills that allowed me to work in many different settings and gave me opportunities to experience a lot of those settings even before I graduated," she noted. "That was very helpful because it gave me a very well-rounded base. It taught me how to dive in and find answers and look for solutions and be a part of a team. It all rolls up into the things that are required to be a leader."

Even with her many professional commitments, Rose stays connected to her alma mater. She participates in occasional teaching laboratory sessions at Grand Valley and maintains relationships with faculty members. Her hospital provides numerous clinical experiences for Grand Valley students and hires a large number of graduates.

It's all part of her overall philosophy of being the best health care professional leader possible. "My goal every day," she said, "is to have a positive impact on my organization that is going to contribute to its success and its sustainability; to create an environment where staff, therapists, nurses, and physicians can do what they do best every day and that's to take care of patients; and to give them the opportunity to provide our patients with the highest quality of care available. "

April Gamble, '12, Clinical Coordinator and Physical Therapist, Eliott's Corner – A Division of Olivia's Place

There are a few events key in April Gamble's time as a Grand Valley physical therapy doctoral student that may help explain why she is currently working as pediatric clinical coordinator and physical therapist in Beijing, China.

One is her role as student coordinator of a community outreach initiative in which she coordinated pro bono physical therapy services for uninsured populations

at two Grand Rapids area clinics. Another is her participation in a two-week service trip providing physical therapy services to underserved Spanish-speaking people in Guatemala. Finally, is her time as Lulenski-Smith Resident in Neurological Physical Therapy at Mary Free Bed Rehabilitation Hospital in Grand Rapids.

April Gamble, '12

"My experiences at Grand Valley made me want to do international work and service work," said Gamble, who received her Doctorate of Physical Therapy from Grand Valley in 2012. "Those experiences helped me understand the physical therapy profession and practice and made me want to advocate for that around the world. The experiences gave me the ownership of the whole profession of the physical therapist, and that's a lot of what motivates me here in my work in China."

Her employer, Eliot's Corner, a division of Olivia's Place, which is based in Shanghai, provides world class, multidisciplinary, pediatric therapy to children of all abilities and all ages through pediatric therapy services, educational outreach, and foundation initiatives.

Working in China, Gamble has become especially aware of how highly, and differently, trained Grand Valley students are than students from other schools. "I work with health care professionals from all over the world," she said. "Most of them are Western-trained from good educational programs, but how I notice that I'm a little different is that I have better skills in evidence-based practice. I'm better able to understand how to ask questions about my patients, to find the current literature and integrate that into my clinical practice along with the family and the patient's characteristics. I can do that a lot more fluidly. That's something that Grand Valley definitely developed well in me."

Wherever in the world Gamble's career takes her next, it's obvious that her focus will always be on the patient. "I wanted to be a health care professional where you actually get to build relationships with people and physical therapy is one where you really get to do that," she said of why she chose Grand Valley's PT program after majoring in exercise science as an undergraduate. "You get to create close connections with people and lifelong connections where you're helping them reach independence and travel on a journey with them, especially when you're working in pediatrics or neurology."

Libby DeMull, '11 and '14, Speech Language Pathologist, Agility Health

Choosing Grand Valley State University for her Master of Science in speech language pathology wasn't a difficult choice for Libby DeMull. "I wanted to practice speech language pathology in a medical setting," she said, "so I wanted to make sure that wherever I went to school I'd have a lot of opportunities to intern in a medical facility."

Grand Valley's program met those criteria. By the time DeMull was ready to graduate, she had spent four semesters in progressively challenging internships at three West Michigan organizations, culminating in a semester assignment working full-time with spinal cord injury patients at Mary Free Bed Rehabilitation Hospital in Grand Rapids, MI.

Libby DeMull, '11 and '14

"It's clear that Grand Valley values preparing its students to work with other health care professionals in the field."

Those experiences have already paid off for the December 2014 graduate as she began her career as a speech language pathologist for Agility Health in Grand Rapids within weeks of graduation. She works with geriatric patients on disorders of cognition, swallowing, speech, and language.

Likewise, she recognizes that her education prepared her not only for the technical aspects of the job, but for the interpersonal parts as well. "I've had several compliments from previous preceptors at my internships and now from the director of rehabilitation at my Agility Health site about working with other professionals," she said. "I had a

lot of experience in the interdisciplinary classes at Grand Valley, it's clear that Grand Valley values preparing its students to work with other health care professionals in the field."

Another factor in DeMull's choice of Grand Valley for her graduate degree was the bachelor's degree in communications studies she earned at Grand Valley in 2011. Though it isn't the most common route to a health-related master's degree, it worked well for DeMull.

"Normally people go from health professions to speech language pathology," she said. "I took more of a big picture communication route." She discovered her passion for communications studies through Grand Valley's liberal education foundation, but didn't have a clear career path in mind as her undergraduate graduation approached. "Then I found the field speech language pathology. I knew I wanted to help people who were having difficulty communicating, be of use in the community, and have a career in a thriving field. These aspects came together for me as speech language pathology."

Less than a year from completing the speech language pathology program, DeMull has already been able to give back by mentoring prospective graduate students. "It's a good connection for the people coming in to have," she said. "Having recent graduates to consult with and learning what they need to work on and focus on during the program is helpful to them. It also gets us connected back with the professors so that, in the future, we can hopefully serve as preceptors ourselves."

2014 PUBLICATIONS, PRESENTATIONS, AWARDS, AND FACULTY ACHIEVEMENTS

The following pages list the publications, presentations, awards, and faculty member achievements that took place during the 2014-2015 academic year. The depth and breadth of the work being done by Grand Valley faculty members in the health professions is impressive and worthy of recognition and celebration.

Publications: Peer-reviewed Journal Articles

Harro, C. C., Shoemaker, M., Frey, O., Gamble, A., Harring, K., Karl, K., … VanHaitsma, R. (2014). The effects of speed-dependent treadmill training and rhythmic auditory-cued overground walking on balance function, fall incidence and quality of life in individuals with idiopathic Parkinson's disease: A randomized controlled trial. *Neurorehabilitation*, *34*(3), 541-556.

Harro, C. C., Shoemaker, M., Frey, O., Gamble, A., Harring, K., Karl, K., … VanHaitsma, R. (2014). The effects of speed-dependent treadmill training and rhythmic auditory-cued overground walking on gait function and fall risk in individuals with idiopathic Parkinson's disease: A randomized controlled trial. *Neurorehabilitation*, *34*(3), 557-572.

Herries, A., Kappen, P., Kegley, A., Patterson, D., Howard, D., de Jonge, M., … Adams, J. (2014). Palaeomagnetic and synchrotron analysis of > 1.95 ma fossil-bearing palaeokarst at Haasgat, *South Africa. South African Journal of Science*, *110*(3-4), 40-51.

Ho, J., Yeh, Y., Wang, H., Khoo, S., Chen, Y., & Chow, C. (2014). Removal of nickel and silver ions using eggshells with membrane, eggshell membrane, and eggshells. *Food Science and Technology Research*, *20*(2), 337-343.

Iwamoto, K., Birkholz, P., Schipper, A., Mata, D., Linn, D., & Linn, C. (2014). A nicotinic acetylcholine receptor agonist prevents loss of retinal ganglion cells in a glaucoma model. *Investigative Ophthalmology & Visual Science*, *55*(2), 1078-1087.

Kenyon, L. K. (2014). [Review of the book *Gross motor function measure (GMFM-66 and GMFM-88) users' manual (2nd ed.)*, by D.J. Russell, P.L. Rosenbaum, L.M. Avery, & M. Lane]. *Physical and Occupational Therapy in Pediatrics*, *34*(4), 341-342.

Kinne, B. L., Baker, B. J., & Harro, C. C. (2014). Identification of the affected ear in lateral canal benign paroxysmal positional vertigo. *Physical Therapy Reviews, 19*(5), 293-301.

Kinne, B. L., Crouch, N. A., & Strace, C. L. (2014). Anterior canal benign paroxysmal positional vertigo treatment techniques. *Physical Therapy Reviews, 19*(2), 79-85.

Levy, H., Ubel, P., Dillard, A., & Fagerlin, A. (2014). Health numeracy: The importance of domain in assessing numeracy. *Medical Decision Making, 34,* 107-115.

Liu, Z., Szarecka, A., Yonkunas, M., Speranskiy, K., Kurnikova, M., & Cascio, M. (2014). Crosslinking constraints and computational models as complementary tools in modeling the extracellular domain of the glycine receptor. *PLoS ONE*, *9*(7): e102571.

Muller, L.A., Isely, P., & Levin, A. (2015). Employer reactions to the Affordable Care Act. *Benefits Quarterly*, *31*(1), 51-63.

Ostrow, B., & Strickler, T. (2014). Post-plastination dissection of a bowfin fish (Amia calva) plastinate exposes additional structures and improves specimen utility. *The Journal of Plastination*, *25*(2), 15-25.

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.

Ross, S. R., Irwin, C. C., Irwin, R. L., Martin, N. T., & Ryan, T. D. (2014). The development of swimming skills for African American youth: Parent and caregiver perceptions of barriers and motivations. *International Journal of Aquatic Research and Education*, *8*(3), 219-239.

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., Platko, C. M., Cleghorn, S. M., & Booth, A. (2014). Virtual patient care: An interprofessional education approach for physician assistant, physical therapy, and occupational therapy students. *Journal of Interprofessional Care, 28*(4), 365-367.

Shoemaker, M. J., Gaskell, A., Sefton, D., Vandebunte, K., Dickinson, M., Karia, D., … McLeod, J. (2014). Early ambulation predicts length of stay and discharge location following left ventricular assist device implantation. *Cardiopulmonary Physical Therapy Journal*, *25*(3), 75-85.

Shorey, R. C., Larson, E., & Cornelius, T. (2014). An initial investigation of the relation between mindfulness and female perpetrated dating violence. *Partner Abuse*, *5*, 3-20.

Shorey, R. C., Seavey, A. E., Quinn, E., & Cornelius, T. (2014). Partner-specific anger management as a mediator of the relation between mindfulness and female perpetrated dating violence. *Psychology of Violence*, *4*, 51-64.

Wei, C., Lu, Q., Khoo, S., Lenski, M., Fichorova, R., Leviton, A., & Paneth, N. (2014). Comparison of frozen and unfrozen blood spots for gene expression studies. *Journal of Pediatrics*, *164*(1), 189-191.

Publications: Books, Chapters in Books

Hoogenboom, B. J., Bennett, J., & Clark, M. (2014). Establishing core stability in rehabilitation. In B. J. Hoogenboom, M. Voight, & W. Prentice (Eds.), *Musculoskeletal interventions: Techniques for therapeutic exercise (3rd ed.)*. New York, NY: McGraw-Hill Education/ Medical.

Hoogenboom, B. J., Cook, G., & Rose, G., & Voight, M. (2014). Functional movement assessment. In B. J. Hoogenboom, M. Voight, & W. Prentice (Eds.), *Musculoskeletal interventions: Techniques for rehabilitation (3rd ed.)*. New York, NY: McGraw-Hill Education.

Hoogenboom, B. J., & Lomax, N. (2014). Aquatic therapy in rehabilitation. In B. J. Hoogenboom, M. Voight, & W. Prentice (Eds.), *Musculoskeletal interventions: Techniques for therapeutic exercise (3rd ed.)*. New York, NY: McGraw-Hill Education/Medical.

Hoogenboom, B. J., Schuemann, T., & Smith R. (2014). Considerations for the physically active female. In B. J. Hoogenboom, M. Voight, & W. Prentice (Eds.), *Musculoskeletal interventions: Techniques for therapeutic exercise (3rd ed.)*. New York, NY: McGraw-Hill Education.

Hoogenboom, B. J., & Voight, M. (2014). Introduction to therapeutic interventions: The guide to physical therapist practice, clinical reasoning, and an algorithmic approach to intervention. In B. J. Hoogenboom, M. Voight, & W. Prentice (Eds.), *Musculoskeletal interventions: Techniques for therapeutic exercise (3rd ed.)*. New York, NY: McGraw-Hill Education.

Kinne, B. L. (2014). Benign paroxysmal positional vertigo. In S. L. Mills (Ed.), *Eye movement disorders (nystagmus and strabismus): Diagnosis, management, and impact on quality of life*. New York, NY: Nova Biomedical.

Presentations and Conference Proceedings

Abeare, M., Orr, S., & Sherman, R. (2014). *Neck cooling is ineffective in reducing physiological and perceptual strain following passively-inducing hyperthermia.* Presented at the Midwest Chapter of American College of Sports Medicine 42nd Annual Meeting, Merrillville, IN.

Albrecht, R., & Munk, D. (2013, June). *Taking it to the streets: Field reports on the opportunities and obstacles associated with helping community sports programs adopt the national standards for sport coaches.* Presented at the National Association for Sport and Physical Education 2013 National Coaching Conference, Colorado Springs, CO.

Baker, B. J., Curtis, A., Trueblood, P., & Vangness, E. (2014). *Vestibular functioning and migraines: Comparing participation in those with and without vertigo on a measure of participation.* Poster Presentation at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Baker, B. J., Casterline, M., Decker, J., & VandenBerg, M. (2014). *Sitting balance measures in non-ambulating individuals diagnosed with multiple sclerosis: Existence of a correlation between the Function in Sitting Test and the Smart EquiTest.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Baker, B. J., Robinson, J., Sproat, C., & Wilkins, J. (2014). *Incoming and graduate physical therapy students' attitudes toward older adults.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Bambini, D. & Harrington, S. (2014). *Using simulation with standard patients to teach transitional care – Development and implementation.* Platform Presentation at the National League for Nursing Technology Conference, Nashville, TN.

Bambini, D. R., Meyer, M., Bell, A., Andrighetti, T., Aronson, B., & Shepherd, K. (2014). *The effects of a deliberate practice debriefing model during a response to rescue high fidelity patient simulation.* Platform Presentation at the National League for Nursing Technology Conference, Nashville, TN.

Bartman, C. (2014). *Social work just called; they want to schedule an SP event! Tips to extending your SP program into new disciplines.* Snapshot presentation at the annual meeting of the Association of Standardized Patient Educators, Indianapolis, IN.

Bartman, C., Shoemaker, M., Harro, C., Perkins, R., & French, D. (2014). *Modified tracheotomy tube allows for suctioning of standardized patients.* Snapshot presentation at the annual meeting of the Association of Standardized Patient Educators, Indianapolis, IN.

Bartz, S., Hoekstra, J., & Nichols, T. (2014, September). *Sports safety and injury prevention – Concussion and hydration awareness.* Presented at the 2014 Pediatric Care Symposium, Grand Rapids, MI.

Bergman, D. (2014). *Human impacts: Toxin-induced behavioral alterations in the crayfish.* Presentation at the College of Liberal Arts and Sciences CLAS Colloquium, Allendale, MI.

Berlin, S., Boone, P., VandenToorn, J., Putschko, K., Anderson, L., Arndt, K., … Snider, J. (2014). *A team approach to health and weight loss.* Platform Presentation at the 7th Annual West Michigan Interprofessional Education Initiative Conference, Grand Rapids, MI.

Bontekoe, J., Janardan, V., & Sylvester, F. (2014). *Physical endothelial denudation techniques of porcine mesenteric arteries.* Presentation at the Van Andel Research Institute West Michigan Undergraduate Science Research Conference, Grand Rapids, MI.

Burg, M., Mianecki, M., Hage, A., & Burg, D. (2014). *Use of an internal FLAG epitope for biochemical characterization and localization of histidine decarboxylase (HDC) in tissues of Drosophila melanogaster.* Presentation at the 2014 Society for Neuroscience National Conference, Washington, D.C.

Capodilupo, J., Collins, D., & Schroeder, E. (2014). *Immunodetection of GAP-43 isoforms.* Presentation at the American Association for the Advancement of Science Annual National Meeting, Chicago, IL.

Christians, M. J., & Reitz, N. (2014). *Using bioinformatics to identify the potential modifications on light-response BTB (LRB) proteins.* Presentation at the Michigan Space Grant Consortium Meeting 2014, Ann Arbor, MI.

Christians, M. J., & Rottier, A. (2014). *Shedding light on the phytochrome system: Modification of the LRB E3 ligase.* Presentation at the TRIO McNair Research Symposium, McNair Scholars Program, Cincinnati OH.

Clifford Hart, D.M. (2014). *Phosphoregulation of the Mid1 scaffold in contractile ring function.* Keynote address delivered at the Cancer Biology Graduate Student Research Symposium, Wayne State University, Detroit, MI.

DeWitt, A., Schneider, P., Foxa, G., Gould, K. L., & Clifford Hart, D. (2014). *Sid2 phosphoregulation of the anillin-related Mid1 nuclear localization and fission yeast cytokinesis.* Presentation at the American Society of Cell Biology Annual Meeting, Philadelphia, PA.

DeYoung, M. (2014, May). *A physician, a place, a procedure and a patient.* Keynote address delivered at the exhibit Chasing the White Rabbit: An Historical Look at Mental Illness, Bowling Green, OH.

Fisch, A., Smart, R., Schroeder, W., & Patel, O. (2014). *BIBR 1532 inhibits growth of breast cancer cells.* Presentation at the 36th Annual Mid-East Honors Association Conference, Grand Rapids, MI.

Fisch, A., Smart, R., Schroeder, W., & Patel, O. (2014). *Comparison of nucleoside (AZT) and non-nucleoside (BIBR 1532) reverse-transcriptase inhibitors on triple negative breast cancer cells.* Presentation at the West Michigan Regional Undergraduate Research Conference, Grand Rapids, MI.

Foxa, G., Schneider, P., DeWitt, A., & Clifford Hart, D. (2014). *Establishing the importin protein Imp1 as significant nuclear transporter of Mid1 and its subsequent effects on cell division in the fission yeast.* Presentation at the West Michigan Regional Undergraduate Science Research Conference, Grand Rapids, MI.

Gilbert, T., Moore, E., & Clifford Hart, D. (2014). *Detection of novel associations between cell cycle proteins Mid1 & Dis2 in the fission yeast Schizosaccharomyces pombetein phosphatase Dis2 in Schizosaccharomyces pombe cell division.* Presentation at the West Michigan Regional Undergraduate Science Research Conference, Grand Rapids, MI.

Glass, S.C. (2003). *Effect of pedal cadence on the ventilatory and electromyographic threshold.* Presented at the American College of Sports Medicine Annual Meeting, San Francisco, CA.

Glass, S.C. (2011). *Effect of a learning trial on self-selected resistance training load.* EPS Chongqing International Sports Medicine and Neurology Forum, Chongquing, China.

Goehring, M. T. (2014). *Assistive devices for ambulation.* Platform presentation at the International Conference and Exhibition on Physical Medicine and Rehabilitation, Baltimore, MD.

Goehring, M. T. (2014). *How various health professions ensure quality in the United States.* Poster Presentation at the Prince Mahidol Award Conference, Bangkok, Thailand.

Goehring, M. T. (2014). *Interprofessional efforts in wound care: A review of literature.* Poster Presentation at the West Michigan Interprofessional Education Initiative, Grand Rapids, MI.

Goehring, M. T., Bergmooser, A., Decker, K., Mason, N., & Kinne, B. (2014). *The effectiveness of aquatic therapy following total hip or total knee arthroplasty: A systematic review.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Goehring, M. T., & Crane, B. (2014). *Pressure and shear force.* Educational Session at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Hage, A., Mianecki, M., Trapp, A., Burg, D., & Burg, M. (2014). *Characterization of histidine decarboxylase bearing an internal FLAG epitope in Drosophila melanogaster.* Poster presentation at the Genetics Society of America 2014 National Drosophila Conference, San Diego, CA.

Hake, B., Eovaldi, B., & Sylvester, F. (2014). *Hyperbaric oxygen therapy alters vascular reactivity independent of ATP.* Presentation at the American Physiological Society Experimental Biology 2014, San Diego, CA.

Harraz, O., Kurjiaka, D., & Welsh, D. (2014). *The induction of negative feedback in cerebral arteries by CaV3.2 channels.* Presentation at the 11th International Symposium on Resistance Arteries, Banff, AB, CA.

Harro, C. C., Bontregar, K., Campbell, S., & Chapin, M. (2014). *Effects of botulinum toxin injections into the rectus femoris muscle on gait function in stiff knee gait following brain injury or stroke.* Poster Presentation at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Hatzel, B., Miller, M., Burningham, W., & Bratton, B. (2014). *Effect of Kinesio® taping for muscle inhibition on bioelectrical activity of the middle deltoid.* Poster presentation at the 37th Annual National Conference & Exhibition of the National Strength and Conditioning Association, Las Vegas, NV.

Hisler, G., & Dillard, A. (2014, May). *Effects of information processing systems and health message format on skin cancer risk perceptions and behavioral intentions.* Presented at the Midwestern Psychological Association Annual Meeting, Chicago, IL.

Hoogenboom, B. J. (2014). *Phased-return protocol after herniated lumbar disc injury.* Educational Session at the Cleveland Clinic Sports Symposium: The Lower Quarter, Cleveland, OH.

Hoogenboom, B. J. (2014). *Rehabilitation after total hip arthroplasty.* Educational Session at the Cleveland Clinic Sports Symposium: The Lower Quarter, Cleveland, OH.

Hoogenboom, B. J. (2014). *Return to sport criteria after ACL reconstruction.* Educational Session at the Cleveland Clinic Sports Symposium: The Lower Quarter, Cleveland, OH.

Hoogenboom, B. J. (2014). *Spinal strengthening and core stability training of the female athlete.* Educational Session at the Young Athlete Conference: The Female Athlete, Overland Park, KS.

Hoogenboom, B. J. (2014). *The female athlete triad.* Educational Session at the Young Athlete Conference: The Female Athlete, Overland Park, KS.

Hoogenboom, B. J. (2014). *The spine in sport: Considerations for the female athlete.* Educational Session at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Kenyon, L. K. (2014). *Essential core competencies: A tool for clinical instructors.* Educational Session at the Section on Pediatrics Annual Conference, St. Louis, MO.

Kenyon, L. K., Farris, J., Cain, B., King, E., & VandenBerg, A. (2014). *Development of a tool to aid clinicians in creating power mobility interventions for children.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kenyon, L. K., Hefferan, A., McCrary, P., Westman, M., & Baker, B. (2014). *A home-based body weight supported treadmill training program for children with cerebral palsy: A case series.* Platform Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kenyon, L. K., Hefferan, A., McCrary, P., Westman, M., & Baker, B. (2014). *A home-based body weight supported treadmill training program for children with cerebral palsy: A case series.* Poster Presentation at the Section on Pediatrics Annual Conference, St. Louis, MO.

Kenyon, L. K., Farris, J., Ripmaster, C., Briggs, L., Cain, B., Hannum, N., … Peck, J. (2014). *Em-powering children for movement exploration and success: A case series.* Poster Presentation at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Kenyon, L. K., & Kennedy, E. (2014). *Enhancing clinical reasoning in PT practice within the school system: Application of the school-based HOP-FA.* Educational Session at the Section on Pediatrics Annual Conference, St. Louis, MO.

Khoo, S. K. (2014). *Circulating microRNAs in plasma as predictive biomarkers for Parkinson's disease: A new paradigm.* Presentation at the10th Annual microRNA as Biomarkers and Diagnostics, Boston, MA.

Kilbourne, J. (2014). *Moving education into the 21st century: Creating activity permissible classrooms.* Presented at the 2014 Child In The City Conference, Odense, Denmark.

Kinne, B. L., Baker, B. J., & Harro, C. C. (2014). *Differential diagnosis of lateral canal benign paroxysmal positional vertigo: A systematic review.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kinne, B. L., Crouch, N. A., & Strace, C. L. (2014). *Anterior canal benign paroxysmal positional vertigo treatment techniques: A systematic review.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kinne, B. L., Dulin, C. E., Mitchell, J. M., & Poppaw, K. N. (2014). *The effectiveness of yoga as an intervention in the treatment of patients with chronic low back pain: A systematic review.* Poster Presentation at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Kinne, B. L., Kelly, K. L., Patterson, R. A., & Poirier, A. J. (2014). *The effectiveness of manual therapy techniques in the treatment of patients with hip osteoarthritis: A systematic review.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kinne, B. L., Strace, C. L., & Crouch, N. A. (2014). *The effectiveness of current interventions in the management of lateral canal benign paroxysmal positional vertigo: A systematic review.* Poster Presentation at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Kurjiaka, D., & Zucker, N. (2014). *Impact of fatty acids on endothelial cell Cx43 expression.* Presentation at the Experimental Biology 2014, San Diego, CA.

Linn, D., Lyons, L., & Reinhold, M. (2014). *Neuroprotective effect of an 7 nicotinic acetylcholine receptor agonist and a positive allosteric modulator in an in vitro model of glaucoma.* Presentation at The University of Toledo Midwest Graduate Research Symposium 2014, Toledo, OH.

Matthews, A., McCurdy, C., Miller, H., Parkes, C., Pierson, K., & Whaley, M. (2014, April). *College success for students on the spectrum.* Presented at the START Conference, Lansing, MI.

McGuire, K., & Taylor, M. (2014). *In vivo screening of candidate regulators of stem cell self renewal in the developing embryo.* Presentation at the Society for Neuroscience, Washington, DC.

Mianecki, M., Hage, A., Burg, M., & Burg, D. (2014). *Use of an internal flag epitope for biochemical characterization and immunolocalization of histidine decarboxylase (HDC) in tissues of drosophila melanogaster.* Presentation at the Michigan Chapter of the Society for Neuroscience, Kalamazoo, MI.

Mukhopadhyay, S., Orey, S., Beck, J., Counts, S., & Khoo, S. K. (2014). *Assessment of Parkinson's disease-specific microRNAs in Alzheimer's disease.* Presentation at the GVSU PSM Showcase, Grand Rapids.

Nagelkerk, J. (2014). *Developing interprofessional champions in the clinical environment: Opportunities for preceptors [Webinar].* Interprofessional Webinar Series: A Leadership Discussion on Interprofessional Education.

Nagelkerk, J., Benkert, R., Pawl, B., Myers, A., & Miller, D. (2014). *Testing an interprofessional collaborative practice model to improve obesity-related health outcomes with a statewide consortium.* Platform Presentation at the Michigan Rural Health Conference, Mt. Pleasant, MI.

Nagelkerk, J., Donders, J., Trytko, J., & Pearl-Kraus, L. (2014). *Veteran evaluations of military relevant outpatient traumatic brain injury rehabilitation by an interprofessional team.* Poster Presentation at the All Together Better Health Conference, Pittsburg, PA.

Nagelkerk, J., & Pawl, B. (2014). *Testing an interprofessional collaborative practice model to improve obesity-related health outcomes with a statewide consortium.* Poster presentation at the All Together Better Health Conference, Pittsburg, PA.

Nagelkerk, J., & Pawl, B. (2014). *The West Michigan Interprofessional Education Initiative.* Oral presentation at the All Together Better Health Conference, Pittsburg, PA.

Orr, S., Abeare, Mackenzie, L., & Sherman, R. (2014). *Cognitive and motor skill performance is not improved by neck cooling following passively-induced hyperthermia.* Presented at the Midwest Chapter of American College of Sports Medicine 42nd Annual Meeting, Merrillville, IN.

Patel, O., Fisch, A., Schroeder, W., & Smart, R. (2014). *Effects of short- and long-term azidothymidine exposure on two human breast cancer cell lines.* Presentation at the 18th World Congress on Breast Healthcare, Orlando, FL.

Reiber, C., Smart, R., Schroeder, W., & Patel, O. (2014). *Effects of chronic low-dose anti-telomerase and chemotherapeutic drugs on breast cancer cells.* Presentation at the West Michigan Regional Undergraduate Science Research Conference, Grand Rapids, MI.

Robke, R., Andrus, A., & Ramsson, E.S. (2014). *Histamine linked to crayfish behavior.* Presentation at the Michigan Chapter of Society for Neuroscience, Kalamazoo MI.

Rose, J. (2014). *Glenohumeral biomechanics as quantified by a six-axis load cell and motion capture system during joint mobilization.* Poster Presentation at the American Physical Therapy Association Combined Sections Meeting, Las Vegas, NV.

Rose, J. (2014). *The functional movement screen as a predictor of injury in NCAA Division III collegiate athletes.* Poster Presentation at the American Physical Therapy Association Annual Conference, Charlotte, NC.

Russo, C., & Taylor, M. (2014). *Characterization of candidate genes that regulate stem cell differentiation in the developing chick embryo.* Presentation at the Society for Neuroscience, Washington, DC.

Sarkissian, C. A., & Graham, D. H. (2014). *Genetic analysis reveals pronounced population subdivision in raccoon roundworm in West Michigan.* Presentation at the West Michigan Regional Undergraduate Science Research Conference, Grand Rapids, MI.

Schutten, M. (2014). *Increasing academic achievement through physical fitness, K-12.* Presented at the West Michigan Education Leadership Conference, Grand Rapids, MI.

Schutten, M., & Lewis, C. (2014). *The road less traveled: Curricular mapping for physical education.* Presented at the 2014 American Alliance of Health, Physical Education, Recreation and Dance (AAHPERD) National Convention & Expo, St. Louis, MO.

Sherman, R., & Seitz, L. (2014). *Hydration status during consecutive two-a-day practices in female collegiate soccer players.* Presented at the American College of Sports Medicine 61st Annual Meeting, Orlando, FL.

Shoemaker, M. J., Bartman, C., French, D., Perkins, R., & Harro, C. (2014). *Simulated tracheostomy tube to permit endotracheal suctioning with standardized patients.* Platform Presentation at the International Meeting on Simulation in Healthcare, San Francisco, California.

Shoemaker, M. J., Gaskell, A., Sefton, D., Vandebunte, K., Dickinson, M., Gallagher, C., … McLeod, J. (2014). *Early ambulation as a predictor of length of stay and discharge location following LVAD implantation.* Poster Presentation at the International Society for Heart and Lung Transplantation meeting, San Diego, California.

Shoemaker, M. J., Green, M., & Serba, D. (2014). *Physical therapist assistant delegation and supervision: Five things you need to know.* Educational Session at the Michigan Physical Therapy Association Fall Conference, Kalamazoo, MI.

Shorey, R., Cornelius, T., & Stuart, G. (2014, November). *Emotional regulation deficits as a mediator of the relationship between posttraumatic stress disorder symptoms and female perpetrated intimate partner aggression.* Presented at the Association for Behavioral and Cognitive Therapies 48th Annual Convention, Philadelphia, PA.

Sommers, E., Cleary, I. A., & Thomas, D. (2014). *Overriding the repression of filamentation by Nrg1 using CDC55.* Presentation at the 12th ASM Conference on Candida and Candidiasis, New Orleans, LA.

Spruit, S., Pierson, K., & Owen-DeSchryver, J. (2014, September). *Using the iPad to promote self-management of social initiations for a high school student with Autism Spectrum Disorder (ASD).* Poster session presented at the Second Annual Michigan Autism Conference, Kalamazoo, MI.

Sridhar, S., Durston, M., Dodla, P., Miranti, C., & Singh, S. (2014). *CD82 and prostate cancer metastasis: Identifying a role for the metastasis tumor suppressor protein.* Presentation at the West Michigan Undergraduate Research Conference GVSU, Allendale, MI.

Sridhar, S., Janardhan, V., Miranti, C. K., Singh, S., & Shady, J. (2014). *CD82 and prostate cancer metastasis: Identifying a role for the metastasis tumor suppressor protein.* Presentation at the Annual meeting for the American Society for Cell Biology, Philadelphia, PA.

Sridhar, S., Uhl, K., Khudur, B., Smart, R., & Schroeder, W. (2014). *Biological testing of antitelomerase compounds.* Presentation at the West Michigan Undergraduate Research Conference GVSU, Allendale, MI.

Staves, M., & Kyle, B. (2014). *Quantification of light and gravity effects on the giant internodal cells of Chara.* Presentation at the West Michigan Undergraduate Research Conference, Grand Rapids, MI.

Szarecka, A., & Francoeur, P. (2014). *Dynamics of conformational transition in the Beta-lactam receptor sensor domain.* Presentation at the West Michigan Undergraduate Research Conference, Grand Rapids, MI.

Szarecka, A., Newman, R., Sridhar, S., Smart, R., & Schroeder, W. (2014). *Towards understanding the mechanism of non-competitive inhibition of telomerase.* Presentation at the West Michigan Undergraduate Research Conference, Grand Rapids, MI.

Thompson, W., Kroodsma, D., Tan, Aik C., Obaro, S., & Khoo, S. K. (2014). *Gene expression and pathway analysis of host response in children with typhoid fever infection.* Presentation at the West Michigan Regional Undergraduate Science Conference, Grand Rapids, MI.

Wheatley, E. (2013, October). *Living with contested illness: The torture of turbines and struggles for health justice.* Presented at the 19th International Qualitative Health Research Conference, Halifax, Nova Scotia.

Williams, S., & Thomas, D. (2014). *Quantitative proteomic analysis of protein phosphorylation at multiple time points of the filamentation process.* Presentation at the 12th ASM Conference on Candida and Candidiasis, New Orleans, LA.

Zechariah, A., Tran, C. H, Kurjiaka, D., & Welsh, D. (2014). *Blood flow regulation in the brain: Significance of cell-cell communication.* Presentation at the 11th International Symposium on Resistance Arteries, Banff, AB, CA.

Awards and Honors

Bonni Kinne, Barbara Baker, and Cathy Harro received the Outstanding Professional Poster award at the Michigan Physical Therapy Association Fall Conference.

John Peck, Lisa Kenyon, and Michael Shoemaker (along with 2014 graduates Kelly Carter, Kristen Schwenk, and Laura Ullery) received the Outstanding Student Poster award at the Michigan Physical Therapy Association Fall Conference.

Jonathan Rose received a Special Recognition award for the poster he presented at the American Physical Therapy Association Annual Conference.

Faculty Achievements and Updates

Andrew Booth, assistant professor and chair of physician assistant studies, received a grant from the Health Resources and Services Administration for year three of a project, Physician Assistant Training in Primary Care.

Charlene Dubois, director of clinical education for physician assistant studies, was appointed to the Community Advisory Board of the Western Regional Area Health Education Center.

Priscilla Kimboko, professor of gerontology and health care management, received a grant from the Health Resources and Services Administration for the Art and Science of Aging Conference.

Jean Nagelkerk, vice provost for health, served as the Grand Valley principal investigator for a grant awarded by the Michigan Department of Community Health through the Health Resources and Services Administration for year three of the project entitled *Nurse Education, Practice, Quality, and Retention.*

Jean Nagelkerk, vice provost for health, received a grant from Blue Cross Blue Shield of Michigan Foundation and the Robert Wood Johnson Foundation for a project, Improving Outcomes in Adults with Diabetes through an Interprofessional Collaborative Practice and Education Program.

Michael Shoemaker, associate professor of physical therapy, received a grant from Medtronic Inc. for a project, Exercise and Psychosocial Based Interventions to Improve Daily Activity in Heart Failure.

John Stevenson, associate dean for Graduate Studies, was interviewed by *PT in Motion* for a story on ergonomics and occupational health practice for physical therapists.

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