GRAND VALLEY STATE UNIVERSITY

TRANSFORMING Health Care



2020 Annual Health Report

FROM GRAND VALLEY STATE UNIVERSITY'S HEALTH LEADERSHIP TEAM

We are pleased to release the seventh edition of the Grand Valley State University *Annual Health Report*. Given the extraordinary challenges faced over the past year, celebrating the many contributions and successes of the Grand Valley Laker Effect is even more notable.

With the emergence of COVID-19 in the United States in early 2020, Grand Valley's leadership team made swift and critical decisions to protect the well-being of our students, faculty, and staff. The university's steadfast planning over many years for potential disruptions in educational and service delivery positioned us to effectively manage an unprecedented public health crisis. A dedicated section is included in this year's publication to highlight the university's response to the pandemic. We move forward determined to serve our students and the campus community in ways that continue to protect their health and safety.

Equally impactful this year has been the global call for policy reform to address social and racial equity. Grand Valley is attuned to our community's demands to address the continued equity and social justice issues. In May 2020, President Philomena Mantella stated in a letter to the university community, "All forms of racism, from bias and microaggressions to racialized violence, create an undue weight on our faculty, staff, and students of color. As such, there is a direct need to continue to educate and act on our values of inclusion and equity. We must speak up against bias and confront hatred." As one of the first universities to establish a Division of Inclusion and Equity, Grand Valley remains committed to being an active part of the solution and fostering an inclusive environment.

We remain dedicated to our mission and the responsibility to educate the future health care workforce to meet the demands of the industry. In our most recent academic year, Grand Valley was the preferred learning environment for 9,173 students in 65 health-related programs. We continue to be indebted to our health care partners across the state and beyond who have provided our students with nearly 5,000 clinical and experiential learning experiences as essential components of their education.

Construction of the Daniel and Pamella DeVos Center for Interprofessional Health on the Health Campus is progressing and is scheduled to open in May of 2021. The state-of-the-art and innovative spaces within the building will support development of Grand Valley's advanced curriculums to meet changing health care needs.

We face the future with much optimism and are confident our students will do the same. Challenging and everchanging times often help to further develop our strengths and forge new paths toward meaningful partnerships and solutions. We welcome your engagement as we address our student and community needs in this remarkable journey!

Respectfully,

JEAN NAGELKERK VICE PROVOST FOR HEALTH

JENNIFER DRAKE DEAN, COLLEGE OF LIBERAL ARTS AND SCIENCES

DIANA LAWSON DEAN, SEIDMAN COLLEGE OF BUSINESS

Cynthia Mc Curren

CYNTHIA MCCURREN DEAN, KIRKHOF COLLEGE OF NURSING

George Short Jr

GEORGE GRANT, JR. DEAN, COLLEGE OF COMMUNITY AND PUBLIC SERVICE

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ROY H. OLSSON JR. DEAN, COLLEGE OF HEALTH PROFESSIONS

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PAUL D. PLOTKOWSKI DEAN, SEYMOUR AND ESTHER PADNOS COLLEGE OF ENGINEERING AND COMPUTING

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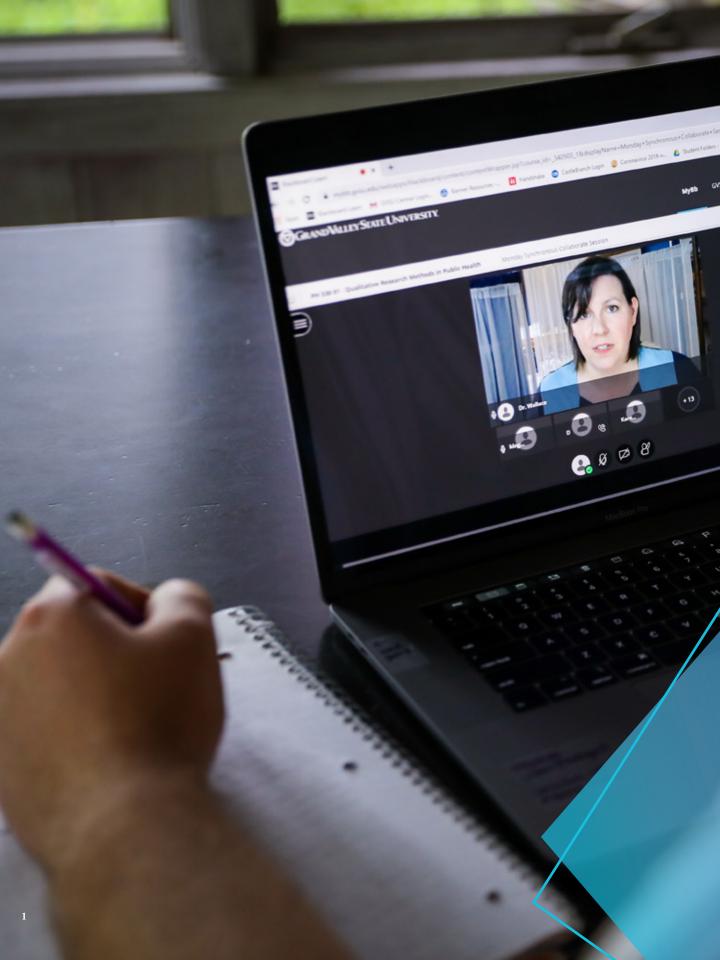
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RESPONDING TO A PANDEMIC

Grand Valley quickly adapted to ensure quality education and to provide vital resources for our students and communities during COVID-19 pandemic.

GVSU Adapted to Remote Clinical Learning and Use of Telemedicine

When President Philomena V. Mantella announced remote learning for all Grand Valley State University students, most classes adapted to new formats quickly. However, the provision of clinical experiences presented challenges for nursing and health professions programs.

Students were required to leave their clinical assignments on March 13, three days before remote learning began.

Vimbainashe Kuzanga is an international student from Zimbabwe and a junior majoring in radiation therapy. Kuzanga was at a clinical rotation at Spectrum Health's Lemmen-Holton Cancer Pavilion when she received news that all clinical assignments were suspended. "We didn't know how serious the situation was, and it was a rush to get all our [assignments] in," Kuzanga said. "It was stressful, especially knowing we might be a step behind."

Program directors adapted quickly and worked to transition clinical and immersion experiences to virtual simulations. Katherine Branch, director of simulation, said virtual simulation platforms were purchased for several academic programs including nursing, physician assistant studies, occupational therapy, and diagnostic sonography. "In the Simulation Center we offered high-fidelity remote simulations and standardized patient remote simulations," Branch said. Nicholus Kopacki, physician assistant studies site director and assistant program director in Traverse City, said he didn't know when clinical partners in northern Michigan would welcome students back, as the health care industry slowly rebounded from triage care during the peak of the pandemic.

There were also many successes, especially those leading to advances in telehealth during the spring/summer semester. Laura Lenkey, assistant professor of communication sciences and disorders, introduced telepractice to her students as a way to help persons with aphasia, stuttering, and other speech and language disorders. It was a practice Lenkey began when she started working at Grand Valley in 2017. She had been utilizing telepractice for many years for clients who didn't have transportation or had to travel great distances for an appointment.

Ann Jonker earned a master's degree in speech language pathology from Grand Valley in 2019 and now works in a pediatric outpatient clinic in Wisconsin. Jonker had been on the job in the spring for a little more than two months when COVID-19 forced the clinic to stop face-to-face appointments. Jonker's telepractice skills and experience played a key role in keeping her clinic operating.

"Throughout our seven clinics, I was definitely one of the few who had significant experience using telepractice," she said. "I have talked to graduates from other programs who know of telepractice but didn't have the opportunity to really learn how to utilize it while in college. When I heard we had to suddenly switch to telepractice because of COVID-19, I didn't have a giant panic attack. I knew I could do it, and I could help teach others." The GVSU Family Health Center also established telehealth services to ensure patient needs were met during the COVID-19 pandemic.

Operated by the Kirkhof College of Nursing, the center is in Grand Rapids' Heartside District, 72 Sheldon Boulevard, It serves Grand Valley students, faculty and staff members, plus Heartside and surrounding community members. Mark Contreras, affiliate clinical faculty member and nurse practitioner, said the center had considered instituting telehealth services before Governor Gretchen Whitmer's stay-at-home executive order, but found insurers were not consistent with reimbursement for such services. The coronavirus pandemic brought some standardization for telehealth reimbursement. Contreras said.

He said the secure telehealth platform has audio and video capabilities. Contreras also noted a decrease in missed appointments since the center rolled out telehealth services.

"We went from nearly 20 percent noshows to only one person who missed an appointment," Contreras said. "That's what happens when we eliminate the barriers to an in-person appointment, like transportation and arranging for child care."

Center for Health Sciences Serves Spectrum Health as Pandemic Alternative Care Site

Governor Gretchen Whitmer joined Grand Valley President Philomena V. Mantella and Tina Freese Decker, president and CEO of Spectrum Health, to tour the Cook-DeVos Center for Health Sciences (CHS) on March 26, as it became a temporary alternative care site for Spectrum Health if needed during the COVID-19 pandemic. The center would be used as an overflow site if Spectrum finds they need to surge outside their current medical facilities to accommodate the patient care needs of the community.

Michigan Governor Gretchen Whitmer (left) and Grand Valley President Philomena Mantella (right) conduct a walk-through of the alternative care site in Cook-DeVos Center for Health Sciences building.



The building is located on GVSU's Health Campus, across from Spectrum Health's Butterworth Hospital on Michigan Street, the Medical Mile in downtown Grand Rapids. Leaders from Spectrum Health said there is space in the building to accommodate up to 250 hospital beds, if needed.

Whitmer called the agreement between Spectrum Health and Grand Valley an "all hands-on-deck strategy." "This is a challenge unlike anything we have ever seen before. We have incredible talent around the state in our health care systems and our communities," Whitmer said. "This partnership is something that is unique and needs to be replicated to become the rule, not the exception." Mantella said she is proud of the university and its leaders for meeting the potential needs of community residents this way. "It makes me so full of pride and so full of compassion for those who are suffering, and ready to do whatever we can to step in and lean into this problem so we can solve it together," Mantella said.

Freese Decker said she and administrators studied hospital models in other states that are now near or over capacity with COVID-19 patients and decided to take action and begin more drills at CHS. "When we're at that capacity, we will need to expand to other sites," Freese Decker said. "We are appreciative of community members, students, and others who are coming together with some clinical skills



Employees from Spectrum Health set up equipment and supplies.



Grand Valley's Cook-DeVos Center for Health Sciences building provided Spectrum with increased capacity of up to 250 hospital beds.

to help us staff this because we will need everyone to be engaged in this process."

Jean Nagelkerk, vice provost for health, said Grand Valley and Spectrum Health established an agreement in 2005, offering CHS as an alternative care site.

Standardized Patient Program Goes Virtual, Provides Telehealth Experience

Grand Valley's standardized patient program launched a virtual component that allowed students in the College of Health Professions, Kirkhof College of Nursing, and School of Social Work to continue to gain clinical experience. Cindy Bartman, standardized patient (SP) program coordinator, said telehealth software was installed in March 2020 in the Cook-DeVos Center for Health Sciences Simulation Center, which provides opportunities for students to participate in remote simulation events with standardized patients.

Of the 130 adult SPs who work in the Simulation Center, Bartman said 60 agreed to continue participating in remote events from their homes. SPs are community members trained to portray a patient in a health care setting, providing students with opportunities to practice and develop skills in a simulated clinical setting.

"It's great for our students and SPs," Bartman said. "SPs are excited to be able to continue connecting with students and assisting them in their growth as emerging health care providers."



Virtual experiences have been key to student learning during the pandemic.

Colin Bachinski is in the first year of the Master's of Social Work program. He said the telehealth experience is a good tool for all health professions students. "With more places like Pine Rest Christian Mental Health Services rolling out telehealth programs, it's great to say that I have experience through these simulations," Bachinski said.

He said the peer feedback remains available as videos are archived for classmates and faculty members to critique.



Contact Tracers Needed: Public Health Responds to a Community Shortage

In partnership with the Kent County Health Department, students in Grand Valley's Master of Public Health (M.P.H.) program helped to fill an important need during the COVID-19 crisis by becoming trained contact tracers.

Students volunteered their time during the spring/summer semester and followed up contacts of patients diagnosed with COVID-19 in Kent County. They interviewed contacts to determine presence of symptoms and provide guidance based on the Centers for Disease Control and Prevention guidelines for contact tracing.

"The strong partnership between Kent County Health Department and the M.P.H. program helped to alleviate some of the stress on health care workers in our county. This was a great opportunity for our students to have real-world, critically needed experience during the pandemic as well," explained Ranelle Brew, chair, Department of Public Health.

Collecting Our Stories

Americans have not experienced a public health crisis of the scale of COVID-19 in living memory. As our lives, jobs, and schools have been disrupted by social distancing guidelines and stay-at-home orders, archivists and librarians across the country are racing to document these historic events. We know that when the historians of tomorrow examine our present realities, the primary sources available to them will affect the stories they tell.

Faculty, staff, health professionals, and community members were invited to share their experiences and observations during the pandemic through the COVID-19 Journaling Project in GVSU's Special Collections and University Archives. The presentations will be curated, preserved, and shared online in the libraries' digital collections.

More than 70 individuals contributed journal entries, videos, and blog posts to the project. Questions about the project can be directed to Annie Benefiel, university archivist and digital collections librarian, at benefiea@gvsu.edu.



University Archivist Annie Benefiel encourages students, educators, and health professionals to contribute their writings and videos to COVID-19 Journaling Project.

Alumnus and Faculty Collaborate in PPE 3D Printing Effort

Jordan Vanderham, president of Orindi and 2018 graduate of the product design and manufacturing engineering program, worked with NN, Inc. on the design of a reusable respirator. John Farris, Ph.D., professor of engineering, assisted with rapid 3D printing of the prototypes and connections to local hospitals.

The respirators aided in the effort to meet the demand for personal protective equipment (PPE) and allowed employees to work safely.

Vanderham also worked with colleagues in West Michigan to establish 3DC19.com, a community-organizing effort to develop PPE using 3D printers. The collaboration quickly grew to a nationwide effort involving more than 445 individuals across the United States who are donating their personal 3D printers to the creation of face shields, ear savers, and ventilator parts, as well as hand-sewing masks.

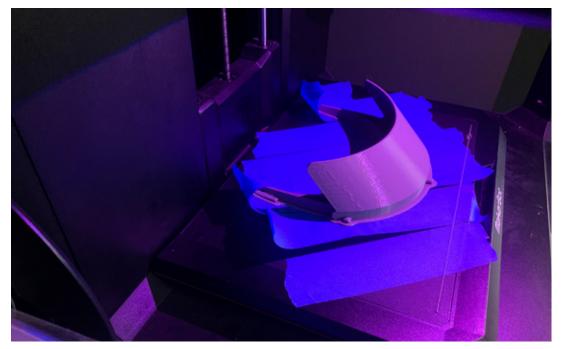
As of May 6, 2020, 3DC19 has printed 54,765 pieces of PPE and created 7,900 pieces of injection-molded PPE, which have been donated to 316 agencies in the United States.

Face Shields Created from NIH Design

Two faculty members from the Department of Visual and Media Arts created face shields for health care workers, primarily through the use of departmental 3D printers. Chelsea Thompto, visiting professor for visual studies and foundations, together with Norwood Viviano, associate professor of sculpture and foundations, ran printers at their homes for the all-day, every day effort to create about 100 face shields. The faculty members used the printers to create headgear for the pieces, and it took upward of five hours for each one, they said.

The specifications for the face shields came from a file approved by the National Institutes for Health (NIH), Viviano said. The part used on the 3D printer was made of an environmentally friendly corn-based plastic. The rest of the piece involves a simple transparency with a three-hole punch and a rubber band.

The face shields were sent to Holland Home and other regional medical facilities.



Faculty used 3D printing technology to create face shields during the PPE shortage early in the COVID-19 pandemic.

DONATIONS OF TALENT AND RESOURCES WERE PLENTIFUL

MASK MAKERS UNITE

Faculty, staff, and students from the School of Engineering and applied Medical Device Institute, along with members of their families and community volunteers, banded together to design and sew approximately 1,000 face masks as part of the Seymour and Esther Padnos College of Engineering and Computing Medical Mask Project. The masks were donated to American Family Urgent Care, Cherry Health System, Beacon Networks, as well as other institutes and individuals in need. Alison vanMelle, a local seamstress, led the sewing operation and trained over a dozen volunteers.

OCCUPATIONAL SAFETY AND HEALTH STUDENTS DEVELOP CHEMICAL AND FIT-TEST GUIDES

The shortage of personal protective equipment was not the only issue facing medical providers and essential employees. The COVID-19 pandemic resulted in an influx of respirator donations to area hospitals. The Occupational Safety and Health Administration requires that employers fit-test every respirator prior to use. To assist with this task, GVSU occupational safety and health (OSH) students created an information sheet for health care providers on the different types of respirators and assigned protection factors as well as a guide on how to conduct proper qualitative fit testing.

The pandemic also created a shortage of available cleaning products and materials. To ensure adequate protection for hospital employees turning over rooms between patients, OSH students created a general job hazard analysis for hospital room changeover, and they developed guidelines regarding which cleaners are approved for use on specific biohazards, as well as what kind of gloves to use.

OSH DEPARTMENT DONATES RESPIRATORS AND FACE MASKS

The GVSU Occupational Safety and Health Management (OSHM) Department quickly donated their stock of laboratory supplies consisting of 50 N-95 equivalent respirators and 50 face masks to Spectrum Health in Grand Rapids, MI. "Spectrum Health has been a significant partner of ours for several years, providing tours and other learning opportunities for our students. We are happy to be able to give back during this unprecedented time," said Professor Dave Huizen, chair, OSHM Department.

GLOVES HELP MEET EQUIPMENT SHORTAGE

The College of Liberal Arts and Sciences labs donated 90,000 disposable gloves to Spectrum Health Systems in late March to help boost strained medical resources. The gloves are typically used by the approximately 6,000 chemistry students during lab experiments. Michelle DeWitt, lead lab supervisor for the Chemistry Department, worked with Spectrum Health to coordinate the donation. After just a few hours, the gloves were loaded on a truck and on their way to the hospital distribution center to be allocated as needed to their facilities.

TRAVERSE CITY PROGRAMS DONATE PPE TO HOSPITAL

Once classes moved to virtual format, Grand Valley's allied health and physician assistant studies program in Traverse City donated all protective equipment to Munson Medical Center. This included masks, gloves, hats, gowns, booties, and other PPE used for class and clinical work.



ADVANCING EDUCATION

Powered-up programs and new learning options come together to develop students who will make a difference in the lives of others.

Applied Food and Nutrition

Grand Valley's Board of Trustees recently approved a new undergraduate bachelor of science degree program in applied food and nutrition (AFN) to be housed in the Allied Health Sciences Department. Graduates of the AFN program will be eligible to sit for the credentialing exam for registered nutrition and dietetic technicians (NDTR).

As the entry-level degree requirement for registered dietitian nutritionists (RDNs) moves to the master's level in January 2024, the AFN program is designed to fill the gap created for bachelor's-prepared dietetic professionals. NDTRs work in a complementary role to RDNs and treat less acute, less complex nutrition-related diseases and disorders compared to the scope of practice of RDNs.

According to the U.S. Bureau of Labor Statistics, employment in the nutrition field is expected to increase by 11 percent between the years of 2018 and 2028, much faster than the average for all occupations. As the percent of Americans diagnosed with nutrition-related chronic conditions, along with the number of elderly Americans, continues to increase, demand for qualified practitioners in this field is expected to continue to grow.

The B.S. in applied food and nutrition will incorporate experiential learning throughout the curriculum and will employ the use of simulation laboratories, as well as supervised clinical learning in professional settings. A Capstone course will provide a culmination of didactic and experiential learning experiences, along with preparation for the NDTR credentialing exam.

The AFN program has been awarded preaccreditation status as a demonstration program of the Future Education Model by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). The anticipated start date for the accredited portion (last two academic years of the program) is Fall 2021. For more information, contact Libby MacQuillan, program director, at macquile@gvsu.edu for more information, or gvsu.edu/ahs/applied-food-and-nutrition-42.htm.



GVSU President Philomena Mantella brings attention to good nutrition with a visit to the farmers market on the Allendale Campus.

Interprofessional Health Informatics Certificate

The Kirkhof College of Nursing in collaboration with the College of Computing and Information Systems and the School of Public, Nonprofit, and Health Administration have introduced a new certificate program designed to prepare individuals who are interested in gaining comprehensive knowledge and skills in the design, utilization, evaluation, and clinical processes of health informatics.

Optimal use of health information technology (HIT) is a priority for the transformation of health care. As health care systems across the nation implemented HIT in inpatient settings over the past decade, emerging HIT fields now extend beyond acute care to include population health informatics, data analytics, and telemedicine.

The certificate is theory-based with an emphasis on practical application by clinicians, information technology professionals, and public health administration professionals. GVSU students interested in gaining knowledge and skills in health care informatics also will benefit from the coursework.

The certificate can be completed in two to four semesters and provides a unique opportunity to pursue a theoretically based and practically oriented education to effectively meet the contemporary needs of health organizations and society. Individuals must have a completed bachelor's degree in a health profession, health administration, or computing and information sciences. Applications are accepted throughout the year for fall cohort start. For more information on the interprofessional health informatics certificate, visit gvsu.edu/kcon/certificates-422.htm.

Public Health Meets Demand by Offering a Hybrid Option Starting in Fall 2020

The success of the Master of Public Health (M.P.H.) program continues to grow. The M.P.H. program has launched a second cohort option in a weekend hybrid format. "Over the years the program has had a number of full-time working professionals matriculate through the program. The option to work while attending graduate school is a sought-after balance for many. It was time to offer this option to prospective students and further expand our program outreach to the community," stated Ranelle Brew, chair, Department of Public Health.

The hybrid component allows students to come to the GVSU campus for one weekend per semester. This weekend is focused primarily on high-impact learning experiences that are embedded throughout the traditional public health program. The remainder of coursework is completed online and the schedule and timeline of 20 months to degree remains the same as the traditional face-to-face format.

For information on the M.P.H. hybrid program, contact Ranelle Brew at brewr@gvsu.edu.

New Undergraduate Biomedical Engineering Major

Grand Valley's School of Engineering recently announced a new undergraduate biomedical engineering major. Students completing this program will graduate with a Bachelor of Science in engineering (B.S.E.) degree, ready to make a profound difference in people's lives by developing innovative solutions for disorders, injuries, and other conditions affecting human body systems.

Biomedical engineering combines knowledge of science, medicine, and mathematics to creatively solve challenging problems involving complex human systems. As the population in the United States ages and technological advancements continue to enhance our ability to provide solutions that allow for higher quality of life, the creative problem-solving abilities of biomedical engineers are needed to design novel medical devices and artificial replacement components that support functions of the human body. The GVSU biomedical engineering major is the only program of its kind in West Michigan, providing a unique opportunity for students interested in the interaction of humans with technology. GVSU biomedical engineering students choose an emphasis in mechanical, electrical, or product design and manufacturing engineering.

Students in the biomedical engineering major complete three semesters of fulltime field education with local employers, allowing them to graduate with a minimum of 1,500 hours of industry experience

"Grand Valley's biomedical engineering program is unique in that it prepares students for careers in the medical device industry without sacrificing the rigor of the foundational engineering disciplines," said Samhita Rhodes, Ph.D., chair, Biomedical Engineering Department.

The School of Engineering accepts applicants for all undergraduate engineering programs through a secondary admission process. Interested individuals should contact Rhodes at rhodesam@gvsu.edu.



Samhita Rhodes, Ph.D., chair, Biomedical Engineering Department said the new undergraduate major is the only program of its kind in West Michigan.



Seidman College of Business EMBA program has been a special collaboration with Spectrum Health since 2014.

EMBA Program Provides Impact on Employee Development

Transformation was at the roots of the Spectrum Health and Seidman College collaboration that began eight years ago. At the time, the vision was to create a health care-specific, communityminded executive Master's of Business Administration (EMBA) program dedicated to developing current and future leaders at Spectrum Health. Grand Valley State University emerged as the best partner to bring this to fruition both because of our shared commitment to community across multiple programs – health and business as well as our interest and capability in creating a custom executive M.B.A. program at the Seidman College of Business to meet Spectrum's needs.

Since the first Spectrum EMBA cohort began in fall of 2014, 63 health professionals have completed the rigorous 22-month curriculum. They've gone on to hold advanced leadership roles within Spectrum and other health care organizations. Today, roughly 27 percent of Spectrum's nearly 7,200 employees are being led by a graduate of the EMBA program.

Recently, the EMBA program was recognized by *Training* magazine as a Best Practices and Outstanding Training Initiatives winner. As described in the magazine, "Over a two-year period, members of the Spectrum EMBA cohort are prepared to lead, be held accountable for outcomes in the industry, and accelerate their readiness to critical health system roles." This recognition is a testament to the power of partnership to meet the needs of our community.



Kathy Harro demonstrates proper technique during PT class.

Physical Therapy Program Kicks Off Fall 2020 with New Cohort

Even during the coronavirus pandemic, the Department of Physical Therapy has a full, new cohort of students who began the program in the Fall 2020 semester. Dan Vaughn, former chair and professor of physical therapy, said the full cohort is a testament to the strengths of the department and the university.

The Doctor of Physical Therapy (DPT) program is a three-year, full-time program graduating 62 students annually. The program's emphasis is to develop practitioners who are capable of stepping into any type of clinical practice upon graduation. Therefore, students are capable of working in cardiopulmonary, neuromuscular, musculoskeletal, or integumentary practice settings. Moreover, they are prepared to work with patients/ clients from across the lifespan.

"Our licensure pass rates continue to be near 100 percent, our faculty members are involved in clinical practice, and students' clinical rotations are scheduled throughout their three years of study in the program," said Vaughn, who retired in August after nearly 25 years of service to Grand Valley. Todd Sander is the new chair of the Department of Physical Therapy. Sander retired from the U.S. Navy and most recently led physical therapy services at the naval base in Chicago. Sander also taught at Baylor University in Waco, Texas.

The Grand Valley program is known for producing graduates that are in high demand (100-percent employed) because of their clinical skills and ability to problem-solve at a high level. Grand Valley physical therapy graduates are strong advocates for their patients and engage in service to the profession and community.

Vaughn also said the annual PT Day of Service was held in the fall semester with 100 percent of students and 80 percent of faculty members participating.

"It shows that our students and faculty are committed to volunteerism. We stress to students that serving the greater good will inspire personal growth," Vaughn said.

More information about the Department of Physical Therapy is available online at gvsu.edu/pt/.

Nursing College Introduces New Certificate Focused on Mental Health

In response to our nation's mental health treatment crisis, the Kirkhof College of Nursing is offering a new post-master's certificate designed to prepare nurse practitioners to provide advanced mental health treatment to individuals with mental health disorders. Psychiatric mental health nurse practitioners (PMHNP) are in high demand and uniquely qualified to fill the workforce gaps in the mental health system. They offer an important perspective on both the physical and mental health needs of people seeking quality care.

The PMHNP certificate can be completed in four semesters and includes courses that focus on growth and development across a person's lifespan, psychopharmacology, theories of mental health and personality, treatment modalities (individual, group, and family), and practicum experiences. Individuals seeking admission to the PMHNP certificate must have graduated from an accredited advance practice registered nurse program and be licensed as a registered nurse in the State of Michigan.

For more information on the psychiatric mental health nurse practitioner certificate, visit gvsu.edu/kcon/psychiatric-mental-health-nurse-practitioner-certificate-421.htm/.



STUDENT LEADERSHIP, DEVELOPMENT, AND SERVICE LEARNING

Grand Valley students learn, give back, and lift others through research, scholarship, and study abroad.

Student Finds Passion for Research Through Health Sciences Early College Academy

Gloria Baker, currently majoring in cell and molecular biology, is in her second year at Grand Valley but has four years' research experience under her belt, thanks to the Health Sciences Early College Academy.

Operated by the Kent Career Tech Center, the academy offers introductory collegelevel courses to area high school juniors and seniors who want to participate in dual-enrollment and to earn college credits at no charge to families. Courses are held at the Cook-DeVos Center for Health Sciences, giving students access to labs, equipment, and other institutions along the Medical Mile.

Baker said she once thought about pursuing vocal music in college, but instead enrolled in a STEM program "because I was looking for something that interested me."

Instructor Russ Wallsteadt involved Baker's class in experiments quickly during her first semester, Baker said. "We extracted our own DNA by doing a cheek swab and mixing it with this solution that created what looked like foggy snot," she said. "We put some of it into a necklace that I still have."

Wallsteadt also connected Baker with a Grand Valley faculty member, who asked Baker, a high school junior at the time, to work in his research lab. Matthew Christians, associate professor of cell and molecular biology, initially asked Baker to shadow him in the lab while he conducted experiments. "She impressed me with meticulous notes she took on the procedures and knowledge she developed as she began reading about the science of the project on her own," Christians said.

Baker continues to work in Christians' lab on the research she started during high school. She is studying protein degradation in plants and screening different stresses to identify any changes to the model plant, a weed found on nearly every continent. The research is important, Baker said, because the process is similar to how humans break down their own proteins.

When Baker enrolled at Grand Valley, she arrived with a scholarship and transferred credits earned at the Health Sciences Early College Academy and from online summer courses at Ferris State University. "I had almost all of my general education courses done before I came to campus," she said.

After graduating, Baker said she would like to enter a doctoral research program. She credited Wallsteadt and the early college program for helping her find a path. "Russ likes to find out what each student is interested in and helps guide them toward that idea," she said.

Find more information about the Health Sciences Early College Academy online at www.thetechcenter.org.

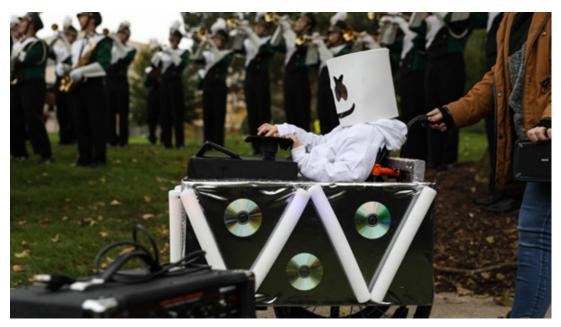
Engineering Students Bring Smiles to Mary Free Bed Patients

Several Grand Valley State University engineering students were part of a large volunteer effort to provide custom-made Halloween costumes for several dozen children who are current or former patients at Mary Free Bed Rehabilitation Hospital. Weeks of preparation culminated October 26 with the fourth annual "Halloween Heroes" parade at the hospital, where community groups, students, patients, and their families all showed off the costumes that were specifically designed to work with wheelchairs and other mobility devices.

Jake Stephens is a Grand Valley engineering student who has been involved with the volunteer activity for the past four years, helping organize planning days before the parade. "I enjoy building and being creative but when you can do it and make a real difference in a child's life, it makes it that much better," Stephens said. He said most of the time volunteers only build the base when the kids are in for measurements and try to surprise them with the completed costume on parade day. "Seeing their faces light up and the pure joy is truly amazing and something you won't forget," Stephens said. "It's a lot of work, and we built an incredible 34 costumes this year, but the kids make all of the hard work worth it."

Some of the costumes from this year included DJ Marshmello, James the Red Engine from The Railway Series children's books, the firetruck from *Jurassic Park*, and a dragon and Viking from *How to Train Your Dragon*.

For more information on the Grand Valley engineering program, visit gvsu.edu/engineering/.



Among the creative costumes and sights at Mary Free Bed's Halloween parade was a young patient dressed as DJ Marshmello.

Eat Your Beans and Call Your Grandparents; Blue Zones Lessons Learned From the Public Health Field

The Master of Public Health (M.P.H.) program prides itself on providing students opportunities to learn from real world, cultural experiences. Bi-annually, the M.P.H. program takes students on an applicationbased, global experience focused on the Blue Zones, defined as the five places in the world where people are living the longest, healthiest, happiest lives.

In 2018, the program travelled to Ikaria, Greece, as the first of five trips to learn from each region. This year, the destination was the Nicoya Coast in Costa Rica. "I can say my first time studying abroad helped me to cultivate an experience learning alongside community members. Costa Rica's culture, traditions, and values helped reconnect me with my roots and further understand the hardships and experiences my ancestors have faced," stated Rodrigo Mata, first-year M.P.H. student.

The trip included a variety of public healthfocused experiences including meeting and interviewing centenarians, exploring farm-to-table agriculture and farmers markets, tours of hospitals and public health clinics, experiences with local trades such as pottery, speakers on water and environmental quality, and tours of hosted communities to further explore Costa Rican spirituality, education, and nature.

The next Blue Zones-focused M.P.H. trip is slated for 2022 in Sardinia, Italy.



The Master of Public Health program visited Ikaria, Greece, in Spring 2020 to learn about one of the five Blue Zones in the world.



Students (left to right) Mackenzie Mckeever, Olivia Keeley, Sarah Rustishauser, and Brooke Burns participated in the escape room event utilizing teamwork and abstract thinking.

Escape Room

Promoting Interprofessional Education for Students (PIPES) is a student-focused organization that hosted several events for students pursuing careers in health-related fields. One event was an interprofessional-themed escape room. Across the country, escape rooms are being used as a new methodology to teach interprofessional communication, teamwork, and abstract thinking.

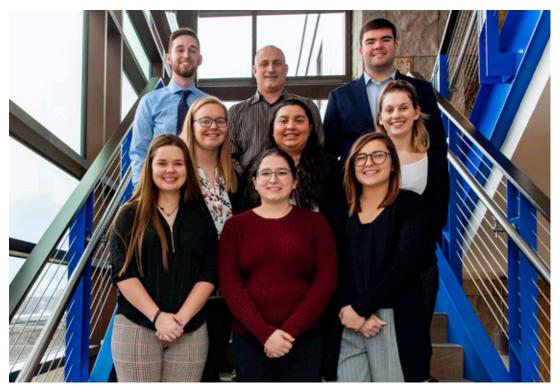
The planning group, made up of members of the Midwest Interprofessional Practice, Education, and Research Center (MIPERC) Interprofessional Education Simulation Workgroup, incorporated several disciplines, including nursing, physical therapy, physician assistant studies, occupational therapy, and pharmacology into the planning. PIPES student members were also involved in the creation of a portion of the escape room. The objective for this event was to maximize patient outcomes through effective and respectful collaboration within an interprofessional team. Interprofessional teams were comprised of three to five members, and each team consisted of members from at least two different health disciplines. The goal for each team was to solve various puzzles to find a lifesaving drug for the patient before time ran out.

PIPES was able to run the escape room with several interprofessional teams of students. While the on-going activity was preempted by Governor Whitmer's stay-at-home order, the workgroup looks forward to sending out an open sign-up for interested participants to join future sessions. Individuals who would like to participate in the escape room can email Doug Ayers at ayersdo@gvsu.edu for more information.

Athletic Training Students Endow Scholarship

Students majoring in athletic training have raised money to endow a scholarship. Members of lota Tau Alpha, a student organization, have raised \$30,000 over the past 14 years for the Athletic Training Student Excellence Scholarship. The scholarship money will help support a student in the Master of Athletic Training (MAT) program who has excelled in the academic, clinical, and leadership aspects of the program and plans to pursue a career in athletic training. Brian Hatzel, faculty advisor for lota Tau Alpha and professor of athletic training, said he is proud of the current members for voting to endow a scholarship that will benefit others, rather than choosing to use the money for their own, personal, professional development.

Criteria for the scholarship include being a student in the MAT program, having a minimum 3.0 GPA, and having completed two semesters.



Top row (L to R): Mitchell Cooper, Dr. Brian Hatzel, Andrew Lowe Middle: Katelyn Nordbeck, Giselle Guasso, Noelle Kaminski Bottom: Maddie Gourley, Amada Monsivaes, Casey Crusius

PT Student Champions Eating Disorder Cause

Allyson Schultz (physical therapy class of 2020) was the recipient of the first annual Solstice Scholarship initiated by an alumni group from Grand Valley's physical therapy program. The group of physical therapists chose "Lift. Others. Up." as the motivating tagline of the \$500 scholarship and will make it available annually to a second-year Grand Valley physical therapy student who best exemplifies two qualities: philanthropic interest and physical activity. The \$500 may be used as a donation to the student's chosen cause (philanthropic interest) and for expenses associated with the student's chosen event (physical activity).

Allyson participated in the National Eating Disorders Association (NEDA) Walk with her team on April 14, 2019, and \$400 of her scholarship money was donated to NEDA. Allyson stated that "I was pulled from my love for running while I was very ill with an eating disorder. So, for me, competing in endurance events and beating an eating disorder went hand-in-hand."

In terms of her chosen event, she applied the other \$100 of her scholarship money toward her entry fee into the Grand Rapids Triathlon, which she completed on June 9, 2019. According to one of the scholarship's founders, "Allyson wowed our scholarship committee with her passion, her strength, her personal development, and her clear philanthropy plan."



Physical therapy alumni present scholarship award to Allyson Schultz. From left to right are Adam Fujita, Allyson Schultz, Stephen Leppard, and Adam Beadenkopf.

PRECEPTORS

Preceptors provide exciting opportunities that challenge, inspire, and motivate students to make an impact in their fields and on their communities while they learn.



Physical Therapy

David George, M.S., PT, received a B.S. in health sciences (1997) and an M.S. in physical therapy (2001) from Grand Valley State University. Since then, he has worked as an outpatient orthopedic and physical therapist at Spectrum Health. In his role as the outpatient site coordinator for clinical education, he manages multiple clinical sites throughout West Michigan and provides Grand Valley with approximately 30 physical therapy clinical experience opportunities per year. He also serves as a clinical instructor for one to two Grand Valley physical therapy students annually.

David is an active member of the Michigan Physical Therapy Association's (MPTA) West Michigan Clinical Education Forum. He is an American Physical Therapy Association credentialed clinical instructor, and he received the Spectrum Health Achievement in Continuing Excellence Award in 2018.

When asked how he demonstrates and inspires high standards as an educator, David replied, "First we make it a point to set aside several opportunities for one-on-one teaching time with the student. We also have formal weekly feedback sessions with the student."

Physician Assistant

Kate Jackson, PA-C, has been practicing as a physician assistant (PA-C) for more than five years. She graduated from the St. Francis physician assistant program in 2013 and subsequently accepted a position at Health West in Muskegon, Michigan. Health West is a health care facility providing services in the areas of mental health, developmental disability, substance abuse, physical health, and early intervention and prevention. In her role as a psychiatric PA, her calming and nurturing approach is a perfect fit as she builds rapport with her patients.



She comes from a family of health care providers, many of

whom practice in the areas of mental health and developmental delay. Because of this family foundation, she knew that a practice focusing on mental health would be a good fit for her.

Jackson has served as a preceptor for the Grand Valley physician assistant studies (PAS) program for more than two years. According to Andrew Booth, PAS chair of student services, and faculty member, "She provides a clinical experience for PA students that is informative and exciting in spite of the challenges of this discipline. Her enthusiasm to improve mental health is contagious."

Public Health

Jodie Seese, B.A., NCTTS, TAS, CHWC, initially

found that, in order to realize the full benefit of working with college students on a project that she holds dear, she had to take a leap of faith. In doing so, she discovered that the students have served as critical resources providing skills and knowledge that have supported the efforts of an ongoing community public health program. Jodie serves as director of programming for the LoWellness Health Initiative in Lowell, Michigan.

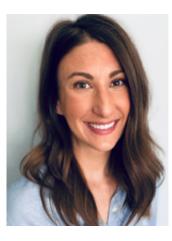


The LoWellness program is a community initiative designed to help residents of the Lowell area lead healthy, vibrant lives. Students, through their public health program internships, have helped to develop community engagement strategies, as well as evidence-based approaches to evaluating the program's survey data. According to Seese, "We really could not have carried out our mission without their input and assistance."

Seese has been involved as a preceptor with Grand Valley's public health program since 2014. She enjoys being a part of the student's educational journey. "I view the students I work with as the future leaders of public health; they are the stakeholders of tomorrow, the key opinion leaders of their generation. They will be the next leaders to impact people's lives in healthy, meaningful ways."

According to Grand Valley public health student Staci O'Brien, "She was always there with a well-timed reminder to encourage me to direct effort where it matters. She has helped me see how I can make an impact on community and how the community can do the same to me."

Seese received a Bachelor of Arts from Michigan State University. She is also a nationally certified tobacco treatment specialist, a certified tobacco addiction specialist, and a certified health and wellness coach.



Recreational Therapy

Andrea Bevolden, CTRS, VST, reflects on her own positive internship experiences as she guides students through the experiential learning part of their education. Having received her bachelor's in recreational therapy from Central Michigan University, she now serves as a recreational therapist at Mercy Health Saint Mary's hospital.

Bevolden feels that one of the most challenging times in a clinician's life is when they work toward independence after the routine of college. Working in a hospital environment that serves individuals 18 years of age and older with medical and psychiatric diagnosis, Bevolden teaches students how to build therapeutic rapport, how to navigate challenging situations, and how to be a productive member of a team. She feels a student's internship is much bigger than learning the hard and soft skills of being a recreational therapist. "My deepest desire is to mentor them as they make difficult life decisions, challenge them to grow, and more than anything, allow them to find who they want to be in this field."

According to Sara Bradley, placement coordinator for Grand Valley's therapeutic recreation program, "Andrea's knowledge of a variety of treatment interventions as well as her guidance and encouragement provide an atmosphere that allows students to develop their own personal therapeutic style." Bevolden is also active in the classroom as a guest lecturer in the program's mental health elective course, sharing her experience and instilling in the students the importance of continued learning after college. Bradley expressed the department's appreciation of Bevolden's commitment.



Speech-Language Pathology

Sarah Vomastek M.S., CCC-SLP, is a seasoned veteran when it comes to mentoring future speech-language pathology (SLP) students. She has mentored 24 graduate students throughout the past 10 years. Her goal is to support graduate students' learning experiences by ensuring that they have a safe place to learn, ask questions, and reset if problems arise. Vomastek works as a speech pathologist with children ages five to 18 with complex communication needs for the Kalamazoo Regional Educational Service Agency - Woods Edge Learning Center.

Vomastek commented, "As speech-language pathologists, our workloads and caseloads are immense which can lead to burnout. My job, as I see it, is to teach the next generation of therapists how to navigate the job effectively and energize them to love the job itself, as I do."

According to Shannon Lowen, clinical education coordinator for the SLP program, "We're very appreciative that Sarah partners with us in clinical education. She provides an exceptional learning opportunity for our students, and each student who has been placed with her has made incredible gains in their clinical competencies."

Vomastek received a bachelor's degree from Michigan State University in 1995 and a Master's of Science degree from Nova Southeastern University in 1998.



COMMUNITY ENGAGEMENT AND PARTNERSHIPS

Transformative connections with school districts, businesses, and local fire and police offer STEM education, hybrid learning, and innovative training for students.

University, Partners Celebrate Opening of Outreach Center in Battle Creek

Leaders from Grand Valley, W.K. Kellogg Foundation (WKKF), and Battle Creek Public Schools (BCPS) celebrated the January 7, 2020, opening of the university's outreach center and a collaborative effort to increase regional access to educational support resources. The GVSU Battle Creek Regional Outreach Center is an initiative stemming from a five-year, \$15.5 million grant from WKKF to Grand Valley. Staff at the center, located at 8 Michigan Avenue West, assist area students and residents with college and career exploration and provide help with federal aid forms and college applications. President Philomena V. Mantella said the university's presence in Battle Creek extends beyond its physical office space. "I would encourage people to not think about the university's impact as they might have in the past, in terms of acreage," Mantella said. "In today's digital age, our impact is greater than the outreach center. Think about Grand Valley as a small but mighty partner to help build this community."

LaJune Montgomery Tabron, WKKF president and CEO, said the outreach center will aid in job creation, talent development, and a "culture of vitality" in Battle Creek. The event was held at the W.K. Kellogg Foundation building, and tours of the outreach center followed. Tabron said, since the grant announcement in May, Grand Valley faculty and staff members partnered with BCPS to offer professional development programs and



Grand Valley Battle Creek staff and community members cut the ribbon for the opening of the Battle Creek Outreach Center.



Leading the Grand Valley Battle Creek Outreach center are (front) Jean Nagelkerk, Grand Valley vice provost for health, and Al Shifflet III, director of community engagement, along with (back) staff members Da'Vonna Perry, Matthew Bozzo, and Sara Burtis.

mentorship to teachers, as well as beginning a teacher education pipeline program for classroom assistants. BCPS middle and high school students have attended Grand Valley summer camps focused on STEM and health care fields. "We want to ensure that all of our children will be given the opportunity to thrive," she said.

Grand Valley Provost Maria Cimitile said faculty and staff members from the College of Education and other university departments are dedicated to providing Battle Creek partners with a "high-touch experience" incorporating innovative programming and technology. "My colleagues are walking handin-hand with BCPS to replicate what we know is a high-quality experience," Cimitile said.

Many BCPS students would be the first in their families to attend college. Kim Carter, BCPS superintendent, said the center is one aspect of the grant that helps disrupt any barriers to higher education by providing resources, advising, and assistance with college applications and federal aid forms. "When our schools are strong, our community is strong," Carter said. For additional information about the Battle Creek Regional Outreach Center, contact Al Shifflett, director of community engagement, at shifflea@gvsu.edu. To check out the center's activities, go to gvsu.edu/battlecreek/.



The newly renovated facility is located in downtown Battle Creek.



Jacob Avalos



Dai'Mion Banks



Aubreanna Chaffee



Darryl Gee



Jose Hernandez Chavez



Jonah Hurtado-Macias

Battle Creek High School Students Earn Scholarships Through W.K. Kellogg Foundation Partnership

Six high school seniors from Battle Creek interested in pursuing education, nursing, or health professions received scholarships to attend Grand Valley in the fall through a partnership among the university, Battle Creek Public Schools, and the W.K. Kellogg Foundation.

The Battle Creek Central High School students are Jacob Avalos, Dai'Mion Banks, Aubreanna Chaffee, Darryl Gee, Jose Hernandez-Chavez, and Jonah Hurtado-Macias. Through the BCPS Health and Teacher Education Pipeline Scholarship program, the students will receive funding to cover tuition, fees, housing and dining, plus a book stipend for eight semesters.

President Philomena V. Mantella said, "The scholarship program is another tangible outcome of this transformative partnership."

According to La June Montgomery Tabron, president and CEO of the W.K. Kellogg Foundation in Battle Creek, "These six students exemplify the talent and dedication of BCPS students."



Health Forum Panelists from left to right: Philomena Mantella Grand Valley State University; Bill Pink, Grand Rapids Community College; Shana Lewis, Trinity Health; and Pamela Ries, Spectrum Health.

Collaborations Key to Aiding Health Care Talent Shortage

GVSU President Philomena V. Mantella and other leaders said collaborations and partnerships among health care institutions, K-12 schools, colleges, and universities are critical to maintaining and expanding the health care workforce in the region. Mantella joined Bill Pink, president of Grand Rapids Community College; Shana Lewis, executive director of talent acquisition at Trinity Health; and Pamela Ries, senior vice president of human resources and chief human resources officer at Spectrum Health as panelists on March 6, 2020, at the Health Forum of West Michigan event held at the DeVos Center. The monthly series is led by the Office of the Vice Provost of Health.

Mantella said Grand Valley has a rich tradition of establishing innovative community partnerships and delivering on its promise to produce, in this case, graduates to fill health care jobs. She added that expanding those partnerships and offering new opportunities for learners are keys to helping ease a critical shortage of workers in West Michigan and nationally. "We are expanding opportunities for learners through online degree programs and certificates that will help students scaffold their credentials into different careers," Mantella said.

The expansion of the Health Campus creates more opportunities for program expansion and more space for students to learn, Mantella said. The digital footprint also expands the university's online accelerated degree and certificate programs. Mantella gave the example of making the hybrid/ online RN to B.S.N. program available at all Grand Valley locations.

Mercer, a global health care staffing and consulting firm, projects the demand for health care workers will outpace supply in five years and estimates the shortage of jobs at 2.3 million by 2025.

Active Assailant Simulation

A group of Grand Valley nursing, health sciences, and athletic training students practiced emergency procedures as a part of Healthcare Simulation Week, a national campaign that takes place in the fall. The active assailant training exercise was held September 18, 2019, in the Cook-DeVos Center for Health Sciences on the Health Campus. It was coordinated by the GVSU Interprofessional Simulation Center and sponsored by Priority Health.

The students, along with faculty and staff members, received training from members of area law enforcement agencies, including the Grand Valley and Grand Rapids Police Departments and Grand Rapids Fire Department. They practiced various procedures, including "run-hide-fight," "close-lock-barricade," and "stop the bleed." They also took part in rescue taskforce exercises. Grand Valley students also had the opportunity to portray mock patients being treated at Mercy Health St. Mary's; students from Grand Valley's Early College Program portrayed patients at Spectrum Health.

"Simulation-based training is an effective teaching strategy for skill development in complex situations," said Katherine Branch, director of simulation at Grand Valley. "The training exercise was a success due to the collaborative spirit of Grand Valley within the university and the Grand Rapids community." Other departments involved in the exercise included the GVSU Counseling Center, the FBI, Life EMS, American Medical Response, Kent County Sheriff's Department, Kent County Emergency Management, Michigan State Police, and Grand Rapids Community College.



Students practice the "close-lock-barricade" response during an active assailant simulation.



Mark Contreras, D.N.P., RN, NP-C, affiliate clinical faculty and nurse practitioner along with Jamie L. Hendricks, FNP-BC, RN, provide support to young adults at HQ.

GVSU, Nonprofits Launch Initiative to Aid Homeless Youth

Grand Valley teamed with area nonprofits to officially launch a health initiative in December 2019 in an effort to interrupt the cycle of youth homelessness.

Shandra Steininger, co-founder and former executive director of HQ, called the Comprehensive Health Initiative (CHI) a hub of resources housed at HQ. It's a drop-in center for teens and young adults who are experiencing unstable housing or homelessness. She said CHI will provide hundreds of youth with access to primary health care, health system navigation, holistic therapy and substance abuse intervention.

The core partners with HQ are 3:11 Youth Housing, which provides housing to youth experiencing homelessness; GVSU Family Health Center (FHC), operated by the Kirkhof College of Nursing; the Wisdom Center, which provides counseling services; and Health Net of West Michigan, which provides health system navigation services. Since the announcement of CHI, HQ and 3:11 have merged into one organization, strengthening services for youth in need of housing and resources.



CHI received grant funding in excess of \$400,000 over three years from the Steelcase Foundation, Michigan Health Endowment Fund, Herman Miller Cares, Frey Foundation, and Mars Hills Bible Church.

Mark Contreras and Jamie Hendrick, nurse practitioners at the GVSU Family Health Center, have regular hours at HQ. The Family Health Center, 72 Sheldon Blvd. SE, serves the GVSU community and many adults who live in the city's Heartside district.

The FHC nurse practitioners employ the same relationship-building techniques at HQ that they use with patients at the Sheldon Street center.

"I'm a big advocate that if we're asking a patient questions, we better be able to do something about it," he said. "If I ask an HQ member if they have insurance and they don't know, I can say 'Let me introduce you to my friend at Health Net who can help."

Simulation-Based Education (SBE) Training Partnership in Clinical Dietetics

To advance the use of simulation in dietetics and increase competency in the Nutrition-focused Physical Exam (NFPE) for registered dietitian nutritionists (RDNs), clinical dietetics faculty have provided Spectrum Health's registered dietitians with NFPE training. The training consists of simulation-based education, pedagogy, and assessment through the use of Grand Valley's simulation center and standardized patients. NFPE is a vital component of the Nutrition Care Process and is a skill required of all credentialed RDNs.

Randy Hajek, M.P.H., RDN, a participant in the program noted: "The NFPE training/competency at Grand Valley is unprecedented. I continually refer to the program presentations to maintain and enhance my skills and apply them to individualized care. I find myself making observations on and continually referring back to the presentations, especially with regard to micronutrients. This training is up-to-date, providing new information for even the most experienced registered dietician."

Clinical dietetics faculty member Libby MacQuillan, Ph.D., RDN, CHSE; Jennifer Ford, M.A., RDN, CSO; and Kris Baird, M.S., RDN, FAND, developed the program to meet the needs of Spectrum Health dietitians, along with input from Manager of Clinical Nutrition Jennifer Peterman. M.B.A., I.B.C.L.C., DipACLM. According to Peterman, "It is my goal to ensure that Spectrum Health meets its mission to improve health, inspire hope, and save lives. As our nation and world continue to uncover the significance of malnutrition, our staff of more than 80 registered dietitians at Spectrum Health seek to be best-in-class for assessing and diagnosing malnutrition so that we can intervene quickly and effectively. Our partnership with GVSU is helping us to achieve this goal."

ALUMNI

Passion and collaboration are at the core of success for alumni health care workers.

Kaine Onwuzulike, M.D., Ph.D.

Neurosurgeon, Center for Pediatric Neurosciences, Cleveland Clinic

Playing football may not exactly be brain surgery, but pediatric neurosurgeon Dr. Kaine Onwuzulike said the two have more in common than people may think. Onwuzulike is uniquely qualified to make the comparison. The 1998 graduate played football for the Lakers when Brian Kelly was the head coach and was part of a surgical team that successfully completed the first in-utero correction for a spina bifida birth defect at the renowned Cleveland Clinic in northern Ohio.



The reward of a successful procedure follows a lifetime of training for Onwuzulike, including specialty training to work in pediatrics and neurosurgery following a medical degree from Case Western University.

The preparation for the in-utero surgery was similar to being on a practice field. Onwuzulike said he spent time envisioning his physical moves, and he was prepared to handle unexpected situations. It's something that comes naturally for the former defensive back. "When you have a big case coming up, you envision a successful outcome. You already have a plan B and plan C."

Onwuzulike took the traditional track to medical school as an undergraduate, majoring in biology and chemistry with a minor in physics, but learned that medicine is accessible to students from all backgrounds and interests.

Always having had a passion for the sciences, nature, and math, Onwuzulike explained that the innate beauty of nature has inspired him to ask questions that explore how the world works. "There are boundless things to be discovered, and looking for them is part of who I am." he said. He said his experience at Grand Valley before medical school was foundational in his selfdiscovery, largely because he found a core group of professors who cared about his success.

Rick Rediske, professor and ecological researcher at Annis Water Resources Institute, recalled Onwuzulike hanging around his research lab to study between classes and listening to him talk about football and his dream of pursuing a career in medical and conducting medical research in Africa. He called Onwuzulike's story inspiring. "The true reward of education is seeing a former student grow and make an outstanding contribution," Rediske said.

Grand Valley was a good fit for Onwuzulike, and he credited his undergraduate experience for helping shape his future. "It's a very special place, a place I'll always hold near and dear," Onwuzulike said. "Grand Valley is a big part of why I'm here. I'm a Grand Valley fan for life."

Kenda Klotz, M.P.A., RN, NEA-BC

Clinical Service Director, Cancer Administration, Mercy Health Saint Mary's, Lacks Cancer Center

Kenda Klotz has spent her entire career, nearly four decades, at Mercy Health Saint Mary's because she said the organization's mission and values closely align with her own. "The high quality of care, cost effectiveness, and putting the patient at the center of our work, those values really resonate with me," Klotz said.

Klotz earned a master's degree in public administration with a health care emphasis from Grand Valley in 2003. She earned a bachelor's degree in nursing from the University of Detroit Mercy and said the "broad brush" of the M.P.A. program appealed to her.

"I was intrigued by the program's core curriculum, which mixed nonprofit administration with criminal justice," Klotz said. "The specialization in health care was from a public administration perspective."

She valued conversations with classmates who came from different professional backgrounds and said their discussions helped her look at issues through a different lens.

Prior to being named clinical service director at the Lacks Cancer Center. Klotz served in other nurse leadership roles in Mercy Health Saint Mary's emergency department and oncology unit, and also as a clinical research nurse. She moved to the center in 2001 and has a variety of responsibilities, including overseeing the inpatient cancer unit, radiation/oncology unit, **Comprehensive Breast** Center, and palliative and supportive care.

In March, Klotz's role changed as the hospital shifted to care for COVID-19 patients. Klotz and a colleague served as captains of the incident command center, taking in information from representatives from all areas of the hospital and making recommendations to ensure the health and safety of patients and employees. This included,



for example, establishing a buddy system around personal protection equipment. Klotz said before staff members would enter a COVID patient's room, another colleague would inspect their PPE to mitigate exposure to the virus.

"I was really pleased with the actions the hospital took, including testing patients right away," she said.

During that time, Mercy Health and other health care systems stopped cancer screenings due to an executive order from the governor. Klotz said early spring was a difficult period for her and employees as they triaged cancer patients in order to decide which patients would continue treatment during quarantine and which could wait.

Pete VanLaan, J.D.

Associate General Counsel, Metro Health - University of Michigan Health

Like many other aspiring lawyers, Pete VanLaan was drawn to the field because of the romanticized images of debating and arguing cases before a judge in a courtroom. After earning a law degree from the Indiana University Mauer School of Law, VanLaan found a passion for counseling clients.

"I really enjoy walking clients through the steps of a complex law," VanLaan said. "I take the counseling part of law very seriously, providing practical advice on the nuances of the legalities of a situation."

He has worked in health care law since graduating, first as a corporate attorney for Hall Render, the nation's largest health care-focused firm. VanLaan then spent five years as part of Spectrum Health's legal team before joining Metro Health last fall as associate general counsel.

In his role at Metro Health, VanLaan assists with acquiring and leasing property, completing physician/provider employment agreements, and interacting with insurers. He joined the hospital after its 2016 affiliation with the University of Michigan and said the two entities create a stronger health care organization.

"The affiliation with the University of Michigan and Michigan Medicine adds value to Metro Health," he said. "From the point of view of my office, they are a good resource and a good source of knowledge when you need input. More voices in the room add to better decisions being made."

VanLaan earned a bachelor's degree in political science from Grand Valley in 2005. He completed a minor in international business, which he said continues to help him better understand the fiscal side of running a hospital. "By taking economics and finance classes, I can read a balance sheet and contribute to those types of discussions," he said.

While at Grand Valley, VanLaan participated in a study abroad trip to Poland and said it provided valuable cultural experiences. He spent five weeks studying at the Cracow University of Economics shortly after Poland joined the European Union. "It was an amazing experience. I was born and raised in West Michigan; through this program, I learned about other cultures outside of the U.S.," he said.

VanLaan said Grand Valley's Political Science Department prepared him well for law school and the workforce. "My professors required a lot of writing and research, so you had to understand how to use resources at the library. Those skills translated well to law school," he said. "I loved the Pew Grand Rapids Campus, which was beginning to grow by the time I graduated."



Andrea Leslie, M.S.N., RN, NE-BC

President, Spectrum Health United-Kelsey, Big Rapids, and Reed City Hospitals

As president of Spectrum Health United-Kelsey, Big Rapids, and Reed City hospitals, Andrea Leslie said the coronavirus pandemic has taught her and staff members a lot of things. Chief among them: Things aren't as impossible as perceived. Leslie, who earned a bachelor's degree in nursing from the University of Detroit Mercy and a master's degree in nursing administration from Grand Valley, cited telehealth as an example. "We had a three-year strategic plan to increase telehealth appointments to 50 percent of all patient visits," Leslie said. "We had three weeks to implement that plan in March."



Leslie began a nursing career with Spectrum Health in 1997. She served in nurse leadership roles and was named chief nursing officer for Spectrum Health United and Kelsey hospitals in 2013, hospital president in 2016, and in 2018, regional market leader.

It was the outgoing hospital president who initially suggested to Leslie she consider applying for that role. "It helped that I had a clinician's background and was able to use that knowledge base and the theories I've learned when making decisions," she said.

Leslie oversees hospital operations at Spectrum

Health locations in Montcalm, Mecosta, Osceola, and Lake counties. While the number of COVID-19 patients was lower than in metropolitan areas, the pandemic did bring a set of challenges for staff members, she said. "In these rural areas, there is a big population of older residents who have a right to be nervous and cautious about being in public areas. So, we implemented more virtual visits to reach patients in different ways," she said.

She said the weeks in March and April when hospital visitors were not allowed were most difficult for staff members. "It was very eerie to not see visitors in the halls or patient rooms," Leslie said. The communities supported health care workers by placing signs near the hospitals and holding a luminary event during Nurses Week to say thank you.

Leslie has met Grand Valley students who are completing clinical rotations and said rural health care presents opportunities not found in large hospital settings. "In our birthing center, for example, the nurses, who in the delivery room are our triage nurses, also assist postpartum patients," she said. "Professionals in rural health care wear many hats while figuring how to best manage patient care with the resources that are available."

RESEARCH AND GRANTS

Faculty research on bacteria and sharing visualizations on big data provide important findings.

Antibiotic Resistance – Paul Cook, Ph.D.

Little by little, Paul Cook and his students are breaking down the structure of pathogenic bacteria that enables resistance to a common antibiotic. The work is painstaking and the breakthroughs, such as one recently published, come in increments that play out over years. In fact, the mindset for Cook, associate professor of chemistry, requires five-year goals. Ultimately, it can take decades to see the research fully applied.

Cook has worked with the antibiotic fosfomycin since his time as a post-doctoral research fellow. The drug, approved in the 1970s, is commonly used to treat conditions such as urinary tract infections.

The newest research, recently published in *Protein Science*, sheds more light on the protein structures of the rogue bacteria that combat the effectiveness of the antibiotic. Mary Karpen, professor of chemistry, and Robert Woodward from University of Mount Union also collaborated on the research, Cook said. In addition, two of Cook's students, who both continued on to the medical field, were also credited on the paper: Chelsea Meloche and Michaela Castleman.

Grand Valley researchers used X-ray crystallography at the Argonne National Laboratory near Chicago to help analyze the protein crystals, providing more crucial foundational information about the bacteria.

Cook and his team placed the information in a public protein data bank that is available to scientists, including those working on antibiotic resistance. Understanding the



components of that protein will allow medicinal chemists to design a drug to reduce or even eliminate resistance to the antibiotic.

The benefits are multifold, according to Cook. For one, the research is producing important knowledge on thwarting resistance to the antibiotic. Also, academia is what Cook calls a "good niche" for antibiotic resistance studies since the market incentives for pharmaceutical companies to do that research are limited. And crucially, the opportunity for undergraduate students to learn how to break down proteins in this manner trains them for their future, whether it's in antibiotic resistance research or another area, such as cancer. His work was done under a National Institutes of Health grant.

"The research is approachable for students," Cook said. "There is the goal of treating antibiotic resistance, and the way the projects can be arranged into manageable chunks is good for undergraduates because they can fit that into their class schedules." The access Cook's students get to a facility such as the Argonne National Laboratory is rare at the undergraduate level, he said, and a key factor in the comprehensive training the students receive.



Big Data Being Used to Help Track, Study Coronavirus

In a global pandemic, it can be hard for scientists, policymakers, and governments to effectively communicate accurate information about complex topics to the general public, but the growing field of data science and analytics is helping to make information easier to understand. "Right now, big data and analytics contain incredibly powerful tools to help us in the face of a pandemic," said Ed Aboufadel, associate vice president for academic affairs and leader of Grand Valley's Big Data Initiative. "We have the immense speed and power of computers today, as well as new and novel ways to collect data. With the coronavirus, people are developing clever approaches of using data to better understand the pandemic and help more people survive."

Aboufadel said that in March, he started getting emails from faculty members sharing good examples of data visualizations being used to explain important information related to COVID-19. To keep those examples in one space and make them available to the GVSU community and the public, he started a website that serves as a repository of visualizations and articles that use data to provide and explain information. "Colleagues from many different disciplines started sending links about COVID-19, and I really began to see what was going on, how big data was being used," Aboufadel said. "The analysis of big data so far in this crisis has helped scientists understand the speed and geography with which the virus spreads and how to work on mitigation, so we all aren't stuck at home for the next six months."

A good example, he said, is the nearly real-time data site being run by The Johns Hopkins University and some examples that are also coming from the media. "There's a particularly good animated visualization that used cell phone location data for people in Wuhan, China, and mapped how they traveled to other parts of the world, and it was done like a subway map." Aboufadel said. "Then we have visualizations about curves — the basis for the phrase 'flatten the curve' - that show case numbers relative to the capacity for care in the health care system. I believe some of these visualizations have been important in the decision-making of some lawmakers."

Aboufadel said combining big data with good visualizations helps tell the right story and helps people make the right decisions, but stressed that visualization tools have to be used with accurate data, or information can be misrepresented.

AWARDS

Community Outreach Physical Therapy Program Receives Grant

Laurie Stickler, PT, D.H.S., associate professor of physical therapy, is the faculty advisor for the Physical Therapy Community Outreach Initiative (PTCOI). Dr. Stickler recently received a \$10,000 Free Clinic Funding Grant from the Michigan Department of Health and Human Services to support two pro-bono clinics located in downtown Grand Rapids.

The PTCOI operates the clinics at the Grand Valley Family Health Center and Advent Physical Therapy. Grand Valley students coordinate the activity at the clinics. A volunteer licensed physical therapist and a GVSU student physical therapist team up each week to provide services to the uninsured and underinsured in the Grand Rapids community.

The grant will provide funding for interpretation services and equipment needs. The clinics schedule approximately 200 visits per year, and more than one-half of the patients are limited in their ability to speak English. Qualified interpreters are essential to providing quality patientcentered health care, and working with an interpreter also gives the students a valuable learning opportunity. The PTCOI, a project originally initiated by Grand Valley physical therapy students, is now in its 20th year of service to the Grand Rapids community.

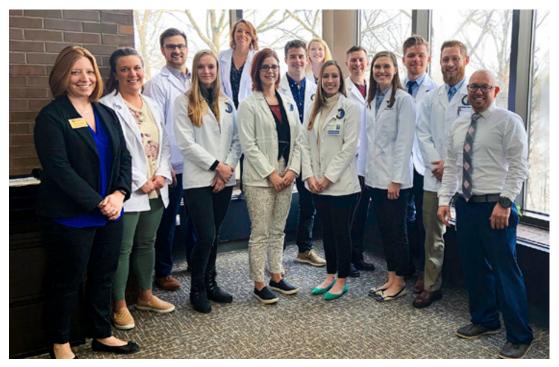
Traverse City PAS Program Earns National Award for Innovation

The physician assistant studies (PAS) program in Traverse City received a national award recognizing its innovation and excellence from the University Professional and Continuing Education Association (UPCEA) at its annual conference in March. The PAS program received the Outstanding Credit Program Award. Nicholus Kopacki, site director for Traverse City and PAS assistant program director, said a number of factors have contributed to the satellite program's success since it was established in Traverse City in 2015.

Kopacki said students in the three graduating classes have all passed the national certification exam, and more than 70 percent are practicing in rural or underserved communities. He added a recent grant through a partnership with Munson Medical Center will fund training for students in telemedicine.

Theresa Bacon-Baguley, professor of PAS and associate dean for research, College of Health Professions, wrote the nominating letter to UPCEA and said the program's delivery model could be replicated to address health disparities in other areas of the country, citing the cost-effectiveness of using technology to deliver live lectures from Grand Valley's Health Campus to Traverse City as among the program's assets.

Shannon Owen, director of Grand Valley's Northern Michigan programs, said the program has also received recognition locally for serving the needs of the community and nationally for its innovative approach to educating students.



The most recent cohort of students from the physician assistant studies program are joined by Shannon Owen (left), director of Northern Michigan programs for Grand Valley, and Nick Kopacki, (far right), PAS faculty and site director for the program.

Jean Nagelkerk, Ph.D., FNP, FNAP, Grand Valley's vice provost for health, was named one of the 50 Most Influential Women in West Michigan by the *Grand Rapids Business Journal.* She is also a current board member for Trinity Health Michigan and Holland Home. She has worked on the Grand Rapids African American Health Institute board since 2011.

Cynthia McCurren, Ph.D., RN, FNAP, dean of the Kirkhof College of Nursing, was elected as the new board chair for the American Association of Colleges of Nursing.

Ranelle Brew, Ed.D., M.S., CHES, associate professor and chair, Department of Public Health, received the American Public Health Association's Sarah Mazelis Award at the association's annual conference in Philadelphia, PA. This award honors outstanding practice in health education.

Bonni Kinni, Ph.D., D.H.Sc., associate professor and associate director of clinical education in Grand Valley's Department of Physical Therapy, received the President's Award at the Michigan Physical Therapy Association (MPTA) Fall Conference. The award is given at the MPTA president's discretion to recognize outstanding service by a member of the organization.

For a listing of faculty and staff publications and presentations, please go to gvsu.edu/vphealth/publications/.

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