



facets

Touching Lives Through Research



University of
Pittsburgh®

Health Sciences
School of Health and
Rehabilitation Sciences



contents

SPRING/SUMMER 2026

WELCOME TO FACETS.

The University of Pittsburgh School of Health and Rehabilitation Sciences (SHRS) is a leader in the field of health care education, with several of our programs ranked among the best in the country and with alumni representing SHRS around the world. Inside every issue of our alumni magazine, FACETS, you'll discover many sides of the SHRS legacy. You'll hear how our students and faculty continue to step out boldly and confidently in the classroom, in the lab and in the community. You'll learn how we help to advance health care in every way possible: leading innovation and collaboration, producing groundbreaking research and establishing meaningful connections. You'll get a sense of our past. And the vision that drives us to shape the future of health care.

About the cover: Researchers Angela Caldwell (Department of Occupational Therapy) and Andi Saptono (Department of Health Information Management) collaborate to establish healthy routines for children with Down syndrome.

1 From the Dean

James "Jimmy" Oñate

2 Touching Lives Through Research

Elizabeth Skidmore

3 Philanthropic and Alumni Engagement

4 Hearing Between the Lines:

Inside Pitt's push to bring precision medicine to hearing health care.

8 From Lab to Market:

Commercial translation prevents injuries and ensures holistic health for all.

14 Unprecedented Collaboration. Groundbreaking Research.

Demystifying how patients experience chronic low back pain.

19 Oh, the Places They Go!

There's no limit to the possibilities for PA doctoral graduates.

22 Healthier Routines Help Children with Down Syndrome Thrive.

25 Game Changers on the Sideline.

26 Eyes on the Future. Roots in the Past.

From Emergency Medicine to the City of Pittsburgh Chief of Police.

27 Leading by Example.

Mentee turns mentor as the new City of Pittsburgh Director of Public Safety.

28 How Baby Elephants Are Enhancing Health Care in Mozambique.

32 Lessons Learned. Trip to Belize transforms the way OT students will practice.

35 "Changing lives through both skill and compassion."

Publisher
James Oñate

Executive Editor
Jill Bodnar

Editors
Caitlin Pugh
Lauren Serge
Joshua Hughes

Writer
Lindy Kravec

Design
Red House Communications

Photography
Rayni Shiring, pages: cover, 1, 14-18, 22-23, 35-37; University of Pittsburgh, pages: 2, 3, 8-9, 19, 27; Aimee Obidzinski, pages: 4-7, 25; Mandy Mahoney, pages: 10-11; Eric Sinagra, pages: 12-13; Kelly Nicholas, page 19; Hollie Rudolph, page 20; Stephane P. VanderMeulen, page 21; Ashley Reasey, page 21; Chandra Carey, page 24; Pitt Athletics, page 25; Chelsea Herdt-Dawson, page 25; City of Pittsburgh, page 26; Tom Platt, pages: 28-31; Pitt Occupational Therapy, pages: 32-34



From the Dean



As I begin my time as dean of the School of Health and Rehabilitation Sciences (SHRS), I want to take a moment to reflect on the extraordinary purpose that unites us—as students, educators, clinicians, researchers and professionals—and the shared mission that brings us together.

LEADING WITH THE HEART.

I come to Pitt after 24 years of teaching, research and academic leadership in health and rehabilitation sciences at various universities and a lifetime dedicated to helping people live their lives fully. I've learned that at the heart of health and rehabilitation sciences is people. We are here to educate future leaders, advance knowledge through discovery, improve the health and well-being of our communities, and provide compassionate care that changes lives. Our classrooms, clinics, laboratories and offices are not simply places of work—they are spaces where human potential is developed, where resilience is restored and where hope is strengthened.

Leading with the heart means recognizing that excellence and kindness are not competing ideals, but rather, they reinforce one another. At the heart of our purpose is a daily commitment to being transformational leaders who recruit, develop and retain individuals and forge relationships. How we support students, collaborate with colleagues, and serve patients and communities matters just as much as the outcomes we measure and the achievements we celebrate. What are our daily actions and values? Some ideas to consider:

- **Compassion:** meeting others with care and understanding
- **Integrity:** doing the right thing, especially when it is difficult
- **Joy:** focusing on well-being and happiness
- **Passion:** deepening our sense of enthusiasm and feeling
- **Purpose:** keeping our “why” at the center of our work
- **Service:** helping others
- **Respect:** valuing every person's dignity and perspective

When we lead this way, every interaction becomes an opportunity to strengthen trust, build belonging and advance our shared mission.

TOUCHING LIVES THROUGH RESEARCH.

Research remains the driving force behind progress in health and rehabilitation sciences. In an era defined by rapid medical advancement, evolving patient needs and growing demands for evidence-based care, the role of research has never been more critical, with the University of Pittsburgh poised at the forefront of health sciences.

SHRS serves as the bridge between scientific discovery and clinical practice. Our faculty ensure that students graduate to become health care professionals equipped with the knowledge and tools necessary to deliver effective, safe and compassionate care.

Research is the foundation that enables practitioners to evaluate the effectiveness of treatments, improve patient outcomes and develop innovative approaches that restore mobility, independence and health to help people live their best life.

Ultimately, research is more than an academic exercise; it is a commitment to improving human health and well-being. It empowers health care professionals to transform lives, influence policies and build a future where health and rehabilitation concepts remain at the forefront of higher education to meet the diverse needs of society.

As the fifth dean of SHRS, I remain committed to upholding the outstanding tradition of the University of Pittsburgh's contribution to impactful research critical to health and rehabilitation sciences and making a positive impact across the globe. Please join me in reading about our wonderful SHRS faculty and staff who are “Touching Lives Through Research.”

James “Jimmy” Oñate, PhD
Dean and Professor



Touching Lives Through Research



Scan the QR code to learn more about research at SHRS.

SHRS is one of six health science schools at the University of Pittsburgh, both benefiting from and contributing to the overall strength of research at our institution. And yet, SHRS is distinct in its approach to health science research.

Many disciplines define health in terms of structures and processes within the body, but the disciplines within SHRS examine health from a different angle. We define health in terms of the below:

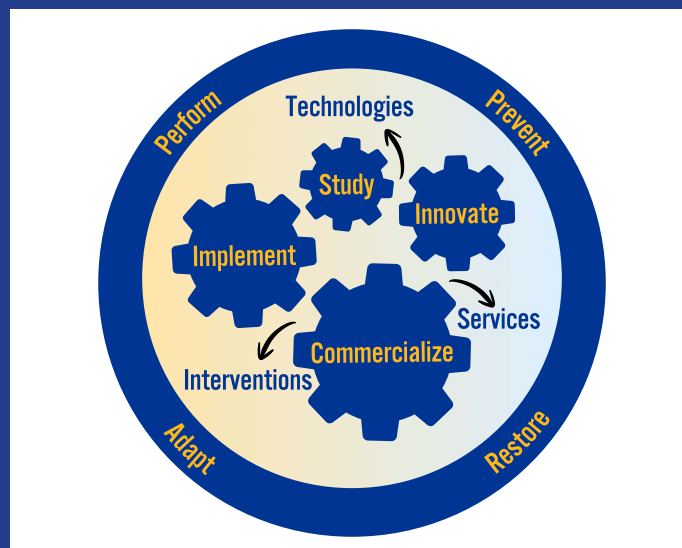
- the match between a person's abilities,
- the activities they need and want to do to lead a meaningful and productive life, and
- the social and physical environment in which they engage these activities.

Looking at health through this lens, a person may have a medical diagnosis of Down syndrome, brain injury or osteoarthritis, but they can still be healthy if they live in an environment that facilitates their ability to be active, engaged members of the community.

SHRS scientists partner with community members, health systems and commercial organizations to tackle the most pressing threats to health and rehabilitation for people with a range of physical, cognitive and emotional abilities across the lifespan. This includes the innovative design, rigorous study, implementation and commercial translation of health and rehabilitation interventions, digital and assistive technologies, and service models focused on supporting the ability to learn, communicate, cope, move, care for oneself and others, and participate fully within one's community. The common goal is to ensure whole person health and access to life for all.



Elizabeth Skidmore
Associate Dean for Research



SHRS has long been recognized as one of the world's foremost leaders in whole person health and accessibility. Under the leadership of prior deans, Clifford Brubaker (1991-2015), Anthony Delitto (2016-24), and David Beck (interim, 2025-26), SHRS has led the field addressing four focus areas that are critical to health and rehabilitation science:

- **Performance:** Assessing and optimizing cognitive, communicative and physical performance, and emotional resilience across the lifespan.
- **Prevention:** Minimizing primary or secondary illness, injury or disability.
- **Restoration:** Remediating physiological or behavioral functions impaired by illness or injury.
- **Adaptation:** Modifying the activity and environment to support independence and community participation for people with disabilities.

SHRS research remains strong. In fiscal year 2025 (FY2025) ending on June 30, 2025, SHRS had \$23.9 million in research expenditures, with funding support from the National Institutes of Health (NIH), the Department of Defense, the Administration for Community Living, and several foundations and industry partners. Moreover, the NIH investment in SHRS is robust relative to its peers. SHRS ranked No. 6 among schools of allied health professions in the Blue Ridge Institute for Medical Research rankings for the federal FY2025 ending on Sept. 30, 2025, a significant increase from its previous position at No. 13.

As this issue of FACETS demonstrates, we have a lot to be proud of with new and established investigators driving SHRS research in these four focus areas of health and rehabilitation science and allowing people to thrive. Learn more about SHRS research at www.shrs.pitt.edu/research.



Philanthropic and Alumni Engagement

Director of Development



If you've ever looked back on your time at Pitt and thought, "I had no idea then what this would turn into," you're in good company. Most people don't see it in the moment—but somewhere between lectures, labs, clinical experiences

and more than a few long days, things start to click. Careers take shape. Purpose comes into focus. And suddenly, what you're learning feels very real.

As the director of development for SHRS and UPMC, I work alongside alumni, donors, faculty and friends of the school who care deeply about preparing students for the realities of health care today and tomorrow.

Support for students, whether it helps ease financial pressure, strengthens hands-on learning or expands access to new tools and technologies, can make a very real difference in how students experience their education and how prepared they are when they graduate.

Teaching and mentoring today means keeping pace with ever-evolving technology, new care models and shifting expectations, all while maintaining the high standards that define SHRS. Philanthropy plays an important role in ensuring faculty can continue to adapt, innovate and prepare students for what's next—not just what's familiar.

Philanthropic investment at SHRS is often guided by a desire to change outcomes. One SHRS supporter chose to invest in research that advances recovery, independence and quality of life for others facing similar circumstances. Their support helps drive innovative work in spinal cord injury, assistive technology and rehabilitation—ensuring that future patients and families benefit from better options, stronger pathways to independence and improved long-term outcomes. This kind of targeted investment exemplifies how philanthropy at SHRS translates lived experience into lasting impact.

If this sparked a memory, a question or a bit of curiosity about what's happening at SHRS, you're always welcome to reach out. You can find me at adamcagle@pitt.edu.

Adam Cagle

Associate Director of Alumni Relations



Graduation marks the end of a student's time on campus, but it also marks the beginning of a lifelong connection. As a Pitt and SHRS alumnus, you join a global community united by shared interests, traditions

and opportunities to stay engaged. Supporting that connection is at the heart of my role as associate director of alumni relations for SHRS.

Through events, communications and volunteer opportunities, we create meaningful ways for alumni to stay connected. My work focuses on building these opportunities for alumni to remain engaged with SHRS and Pitt, their department and program, and one another.

For every alumnus, engagement looks different. Some alumni attend receptions or gatherings at professional conferences, while others volunteer by mentoring students, speaking in classes or sharing career advice with the next generation of SHRS professionals.

What stands out most to me is the enthusiasm SHRS alumni have for staying connected and supporting one another. Whether they graduated recently or decades ago, many are eager to support students, share their expertise and remain actively involved. I'm especially proud to see how dedicated alumni are in continuing the legacy of SHRS research, advancing knowledge and impacting communities through their work every day. The continued engagement of our over 16,000 alumni reflects the collaborative spirit that defines our school.

Graduation may close one chapter, but it also opens the door to an ongoing relationship with the SHRS and Pitt alumni community.

If you are interested in getting involved or would like more information, please reach out to me at madelinedix@pitt.edu.

Maddy Dix



Performance

Assessing and optimizing cognitive, communicative and physical performance, and emotional resilience across the lifespan.



Hearing Between the Lines:

Inside Pitt's push to bring precision medicine to hearing health care.



Assistant Professors Samantha Hauser, Aravind Parthasarathy and Hari Bharadwaj are finding new ways to measure and treat hearing loss through personalized audiology.

Our ability to communicate is our tether to the social world. For most people, hearing difficulties begin the same way: There's an inability to follow conversation in a noisy room. Perhaps you can hear that someone is talking. You just can't make out what they're saying.

This "suprathreshold" difficulty, where the sounds are loud enough to detect but the brain cannot extract meaningful information from them, affects more than 20% of Americans over the age of 12.

It affects not only those with measurable hearing loss but also many whose hearing tests come back normal—including some older adults, veterans and athletes with concussion histories, and workers exposed to occupational noise in settings like the steel mills, mines and farms across Western Pennsylvania.

These patients fall through the cracks because the standard clinical toolkit was not built for this problem. The audiogram measures the ability to detect soft sounds, but not what happens when a patient can hear a sound but cannot understand it. And the blanket label "sensorineural hearing loss" obscures a spectrum of underlying pathologies, each of which may demand a different treatment.

Left: Parthasarathy uses eye tracking technology to capture how much effort it takes to listen under different conditions.

A trio of researchers in Pitt's Department of Communication Science and Disorders (CSD) is working to change that. Assistant Professors Aravind Parthasarathy, Hari Bharadwaj and Samantha Hauser are building the foundation for precision audiology, a model in which every patient receives an individualized hearing profile as specific and actionable as any other personalized medicine approach.

“There are many factors at play when it comes to hearing loss,” says Parthasarathy. “Typically, the components of the ear and brain work together to allow a person to hear. But when there are changes in the ear or brain, or changes in what the ear conveys to the brain, it can be difficult to diagnose exactly where the hearing loss occurs.”

As director of the Translational Auditory Neuroscience Lab, Parthasarathy has adapted electroencephalography (EEG)-based technology so it can capture the brain's electrical response to sound at every level of the auditory pathway, from the cochlear nerve to the cortex. As recently published in *Nature Communications Biology*, the tool records these responses in 15 minutes, giving clinicians a way to see not just whether a patient detects a tone, but where the signal breaks down.

Bharadwaj, vice chair for research in the CSD department and director of the Systems Neuroscience of Auditory Perception Lab, has uncovered a surprising culprit behind these difficulties: the cochlea's frequency map going awry. "When this map becomes distorted after some forms of hearing damage, low-frequency sounds overwhelm the high-frequency speech cues critical for conversation," says Bharadwaj. "The effect persists even with hearing aids, because amplification cannot restore disordered frequency tuning."



Bharadwaj prepares the participant for testing to measure how sounds are processed by the ear and brain.



Bharadwaj inserts an earphone into a participant's ear to deliver sounds that assess how well a listener can hear in a noisy environment.

He adds that there are new diagnostic tests and evaluations that will eventually help more people to hear better. "Building a personalized profile for each patient is essential to determining the best treatment pathway. This helps identify, for example, who may not benefit from traditional hearing aids and needs newer signal-processing approaches instead; who has the specific type of inner-ear damage that emerging pharmacological treatments are designed to target; and who might benefit most from brain training."

"Current hearing tests don't give you the full picture," adds Hauser, director of the Precision Audiology and Clinical Translation Lab. A former practicing audiologist, she uses coordinated testing in animal models and human subjects to build a diagnostic battery that assigns each patient a cochlear damage profile rather than a one-size-fits-all label, guiding clinicians toward the intervention most likely to help.



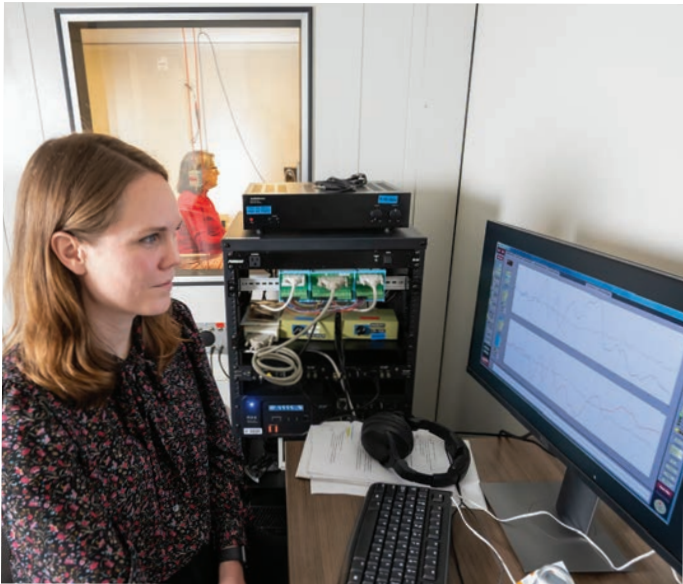
Researchers use cross-species approaches combining insights from animal models and human measurements (EEG setup pictured) to build a diagnostic battery that assigns each patient a cochlear damage profile.

"We can't underestimate the importance of hearing," continues Hauser. She says many people overlook their own hearing loss, but this can have a significant psycho-social impact.

“When someone can’t hear, they become more and more disengaged with those around them,” says Parthasarathy. “There is evidence that untreated hearing loss leads to depression, risk of falling and cognitive decline.”

According to Bharadwaj, there needs to be a better awareness that hearing health is part of a person’s overall wellbeing. He believes their research is a start in the right direction.

The team’s recently awarded \$2.9 million grant from the National Institutes of Health uses multidisciplinary techniques to develop individualized profiles that predict real-world outcomes. The work draws on a registry of over 37,000 individuals with hearing loss under the age of 65 provided by the Pitt Clinical and Translational Science Institute. With gene therapies and AI-powered hearing aids on the horizon, knowing which pathology to target has never mattered more. At Pitt, this future is being built.



Hauser (above) and Parthasarathy (below) build personalized hearing profiles to determine best treatment options.



Measuring changes in the pupil while participants perform tasks estimates listening effort that complements behavioral outcomes.



Pupil changes linked to listening let the team look “under the hood” at processes that might drive listening fatigue and disengagement during conversations in noisy settings.

Prevention

Minimizing primary or secondary illness, injury or disability.



From Lab to Market:

Commercial translation prevents injuries
and ensures holistic health for all.

The portable speakers are cranked up, playing “These Boots Are Made for Walkin’.” A conga line of older adults makes their way around the room, walking left, pivoting right, navigating cones and other obstacles and giving each other high-fives as they pass along the course. This is not a dance. It’s not a game. It’s an evidence-based group exercise program known as On the Move™ (OTM) and it’s designed to improve the quality of walking.

OTM was developed more than 10 years ago by Pitt Professors of Physical Therapy Jessie Van Swearingen and Jennifer Brach as a one-on-one intervention between a physical therapist and patient. After Deborah Brodine, president, UPMC Senior Services, asked if this could be turned into a group exercise class for seniors in the community, Brach began gathering evidence.

The results of a three-year Patient-Centered Outcomes Research Institute (PCORI) grant showed OTM is not only safe and acceptable, but it also offers clinically meaningful improvements in mobility over the standard “Sit and Be Fit” programs for older adults.

It was designated an evidence-based chronic disease management program by the Administration for Community Living in 2018 and an evidence-based fall prevention program in 2025. It is only one of three dually recognized evidence-based programs by the National Council on Aging in the United States.

Since then, Brach and her team have trained more than 180 OTM instructors all over the country and in Australia. The program is licensed for use in 65 locations in 20 states, including Wyoming, where the State Department of Health’s Aging Division made On the Move an official exercise program in their senior centers.

Left: On the Move is an evidence-based fall prevention program designed to improve the quality of walking.



Participants build mobility and coordination skills.

“None of this would have been possible without assistance from Pitt’s Innovation Institute,” says Brach. “They helped me with copyrighting the program and the licensing of the On the Move program.”

“Creating opportunities for researchers to get their ideas out into the world where they can have a societal impact is what we’re all about,” says Evan Facher, vice chancellor for innovation and entrepreneurship and director of the Innovation Institute at Pitt.

It is no small task. According to Facher, last year Pitt researchers submitted 444 new invention disclosures for evaluation—44 of them from SHRS alone. But not every idea, technology or widget is ready for prime time.



PROGRAMS LAUNCH BUSINESSES.

Both Facher's office and SHRS have programs in place to assist with business development—everything from business plan writing to mentorship, financial support and networking opportunities.

The SHRS Innovation Challenge, for example, is a four-week virtual course that encourages Pitt-based researchers to explore the market potential of their work and learn entrepreneurial skills that will help them get there.

Amanda Mahoney (MS '17, PhD '24) and Erin Lucatorto (MS '15, PhD '25) applied for the Innovation Challenge while they were doctoral students in the Department of Communication Science and Disorders (CSD), working on a revolutionary new technology developed by now Emeritus Faculty James Coyle in the Speech-Language Pathology program and Ervin Sejdić, former assistant professor in the Swanson School of Engineering.

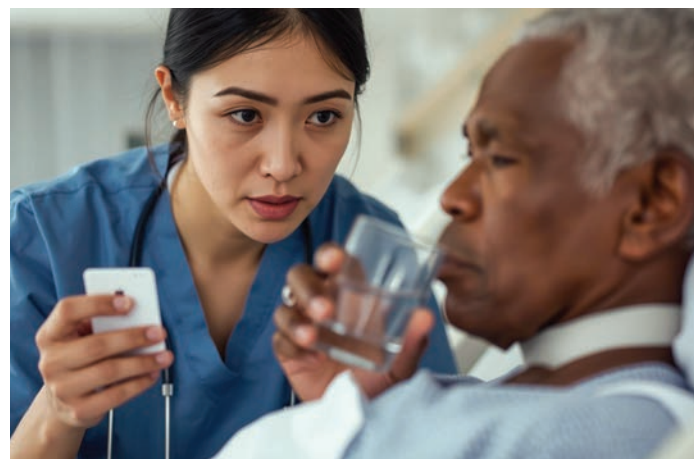
Mahoney and Lucatorto, co-founders of Accelowave.



Their technology, the Aspirometer, showed commercial promise as a non-invasive scanning device that significantly helps to improve care of people of all ages who have swallowing disorders. The Aspirometer analyzes how swallowed material moves during swallowing to determine whether it is entering the airway and placing the patient at risk for aspiration.

Prior to this invention, the method to screen for aspiration was for a patient to drink sips of water and a nurse to watch for signs for aspiration, such as coughing or choking. "This subjective measure is only about 50% accurate," explains Mahoney. "As a result, some patients were put on restrictive diets unnecessarily, and undetected 'silent' aspiration led to often fatal aspiration pneumonia. In addition, an unnecessary clinical burden was put on nurses, physicians and speech-language pathologists."

"With the Aspirometer, health care professionals can accurately and objectively measure aspiration," she continues. "This improves care for people of all ages, reduces a lot of burdens and saves money."



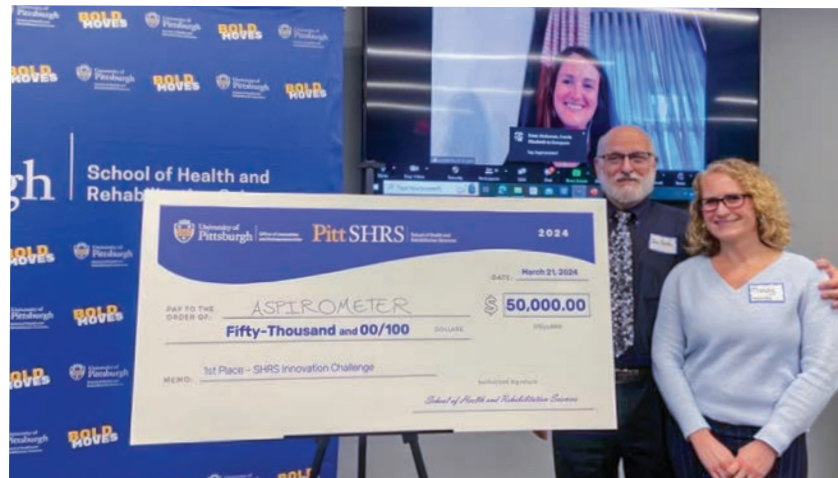
The Aspirometer is a non-invasive scanning device that improves care for people with swallowing disorders.

“Participating in the 2024 Innovation Challenge—and winning the \$50,000 first prize—really started us on our journey,” notes Mahoney, now co-founder and CEO of the medical device company, Accelowave.

The company incorporated in 2024 and continues to develop technologies like the Aspirometer that focus on non-invasive solutions for the early detection and management of swallowing disorders.

The SHRS Innovation Challenge was not the only program that propelled Mahoney and Lucatorto to success. They took third place in the 2024 Michael G. Wells Student HealthTech Challenge at Pitt and second place in Pitt’s 2025 Big Idea Competition. In 2025, they were a winner in the National Institute on Aging’s Start-Up Challenge and Accelerator, and Accelowave was named a semi-finalist in the BNY UpPrize Social Innovation Challenge (Early-Stage Track).

“These competitions added much-needed funding to support the commercialization of the Aspirometer,” says Lucatorto, chief scientific officer of Accelowave. “But they also helped us solidify our business pitch and networking capabilities. We are still in touch with many of the mentors we encountered through these various Pitt programs.”



Mahoney (on screen) joins Jim Coyle and Lucatorto to receive first prize in the SHRS Innovation Challenge.



Lucatorto, Mahoney and Coyle accept the Wells award.



Winning Pitt’s Big Idea Competition helped further fund the Aspirometer.



Eric Sinagra

LEARNING TO THINK LIKE AN ENTREPRENEUR.

Eric Sinagra (MS '14), CEO and co-founder of pathVu, a company dedicated to improving the walkability of pedestrian pathways for people of any ability, also says he learned how to launch his business through various programs and competitions at the University of Pittsburgh.

“As a student researcher, you might think your idea or technology could be marketable, but you probably don’t have any idea how to start a company,” says Sinagra. “Or maybe you’re just interested in doing the research, nothing else.”

“Entrepreneurship is a way of thinking,” he continues. “And there are many resources available at Pitt to help you get there.”

Sinagra credits the BNY UpPrize Social Innovation Challenge for giving him the tools to showcase how pathVu can make a strong social impact in Western Pennsylvania and beyond. The \$100,000 second place prize allowed him to continue his work mapping sidewalks for accessibility.



Former SHRS Interim Dean David C. Beck with Jonathan Duvall and Sinagra.

Sidewalk accessibility is a deeply personal goal for Sinagra. Two members of the company’s leadership team use wheelchairs. Sinagra’s brother, Nick, who holds a master’s degree in media arts and technology and serves as director of technology, and Jonathan Duvall, research biomedical engineer for the Department of Veterans Affairs in Pitt’s Human Engineering Research Laboratories, co-founded the company and still serves as a consultant.

“Accessible pedestrian navigation is at the core of everything we do at pathVu,” adds Sinagra.

The company is currently in the process of developing a new app, pathVu Navigation Lite, which crowdsources real data from users to prioritize improvements, secure funding for communities and create safer and more accessible environments for everyone.





Sinagra says the app will eventually transform how communities assess the pedestrian infrastructure, while helping individuals safely navigate the built environment.

Jon Pearlman, associate dean for SHRS Commercial Translation and professor in the Department of Rehabilitation Science and Technology, applauds the work of SHRS researchers.

“Our goal is to support licensing, technology transfer and funding opportunities for our researchers to complement our school’s efforts in research and innovation,” explains Pearlman. “While they are engaged with their research, we can help make their work commercially viable so it can make an impact on society.”

pathVu collects and prioritizes data to improve safety and accessibility for pedestrians of any ability.

“Our partnership with SHRS is unique and highly successful because of Jon,” adds Facher. “He really is our man on the ground—filling us in on every viable project and helping to bring SHRS ideas into the commercial pipeline.”

Pearlman adds that corporate as well as philanthropic support contributes to the success of many SHRS innovations. “It’s important for our external partners to understand that their funding has a huge impact on new ideas, technologies and products that will improve the quality of life for individuals of all ages and abilities.”



Restoration

Interventions and services to remediate physiological or behavioral functions impaired by illness or injury.

A small motion sensor placed on the lower back records how the spine moves during functional tasks. It measures movement in three directions at once—side to side, forward and back, and rotationally—capturing both the speed of movement and changes in position. This data helps researchers and clinicians better understand how low back pain affects the way people move and whether treatments are making a difference.



Unprecedented Collaboration. Groundbreaking Research.

Demystifying how patients experience chronic low back pain.

Imagine an auditorium filled with individuals of varying ages, genders and races. They have different medical histories, educational backgrounds and incomes. But they have one thing in common: chronic low back pain (cLBP).

How do you treat these individuals?

Clinicians agree that there is no single answer.

Despite the fact that low back pain affects an estimated 619 million people and is a leading cause of disability worldwide, the chronic nature of the disease and the changing course of an individual's experience of pain over time are poorly understood. Not all low back pain has the same intensity and duration. And the pain may be caused by a wide range of factors and respond to different treatments with unpredictable varied efficacies.



The research and support staff team includes from left to right: Nicole Kelly, patient advocate; Gwendolyn Sowa, co-principal investigator, School of Medicine; Michael Schneider, behavioral core co-director, SHRS; Gina McKernan, informatics core co-director, SHRS; Julia Chagas, post doctoral fellow, School of Medicine; Sara Piva, clinical core director, SHRS; Adam Gaupp, research coordinator, SHRS; Charity Patterson, informatics core director, SHRS; Alexandra Gil, clinical core co-director, SHRS; Nam Vo, co-principal investigator, School of Medicine; Zakiy Alfikri, research staff, Swanson School of Engineering; Meenakshi Sundaram, research coordinator, SHRS; Debra Voss, research staff, SHRS; Jessica Eldridge, research coordinator, School of Medicine.



Phenotype phe·no·type

The word phenotype is a scientific term for a cluster of characteristics that suggest a clinical pattern or profile. Saying that someone simply has chronic low back pain is not helpful for determining which treatment is best for that patient. This research is designed to find specific clinical patterns or profiles (phenotypes) that will help inform decision making about which treatment or treatments work best for which phenotype.

GOOD RESEARCH IS A TEAM SPORT.

The multifaceted nature of cLBP requires multifaceted approaches, with experts from diverse fields viewing the disease through a different lens.

Starting in 2019, researchers from various departments within SHRS began collaborating with colleagues from the School of

Medicine and the Swanson School of Engineering in the Lower Back Pain: Biological, Biomechanical, Behavioral Phenotypes (LB3P) observational study, part of the National Institutes of Health (NIH) HEAL Initiative Back Pain Consortium (BACPAC).

Working collaboratively, researchers followed 1,007 cLBP research participants to observe what phenotypes, or patterns, contribute to an individual's experience of low back pain in the hopes of being able to predict the best treatment options.

While medical doctors, surgeons, psychologists, biologists and biomedical engineers brought biological, behavioral and biomechanical expertise to the study, the team from SHRS added important clinical and biostatistical value.

"The SHRS team was really the boots on the ground," says Michael Schneider, professor and director of the Doctor of Chiropractic program. "For the most part, we are the providers who are often the first in line in treating patients with chronic low back pain."

Schneider, along with Sara Piva, professor, Physical Therapy Department interim chair and director of the Physical Therapy Clinical and Translational Research Center; Charity Patterson, director of the SHRS Data Center; and Leming Zhou, associate professor and director of the Master of Science in Health Informatics program, Department of Health Information Management, served as co-investigators on the project.



A digital inclinometer is utilized during the passive straight leg raise test to objectively measure the range of motion at symptom onset, indicating potential nerve root compression or neural tension.



A small motion sensor placed on the lower leg tracks how the leg moves in all directions during movement testing, helping researchers understand how lower body movement patterns may contribute to or reflect low back pain.

Today, thanks to a new \$20 million grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the same team of researchers is continuing and building on their LB3P past work in a new study known as the Holistic Pain Phenotyping (H2P) that will bring them even closer to understanding the whole patient experience of pain in the context of other pain in their joints, muscle and connective tissue.

The goal of both the original and the current study is to find the right treatment for the right patient at the right time.

“This team is committed to working together without barriers to find the most effective treatments for pain,” says Gwendolyn Sowa, chair, Department of Physical Medicine and Rehabilitation and co-principal investigator (PI).

Schneider believes this type of interprofessional collaboration could only happen at Pitt. “Pitt has extraordinary people with extensive experience who are willing to put their personal interests aside and come together to tackle a problem that each of us sees in our individual practices. It’s very unique,” says Schneider.

Researchers are divided into core groups that approach cLBP from different perspectives, comprehensively amassing an unprecedented amount of data. They collect biosamples and biomarkers, and examine movement, behavioral experiences and social determinants of health before categorizing the results into clusters of phenotypes.

They meet several times each month, either in person or virtually, to discuss strategies, analyze data and share insights. They have come to trust one another implicitly and see each other’s contributions in a new light. What they have learned is different from any research they could possibly conduct if they stayed in their own silos.



“I have not seen this level of professional respect and enthusiasm around collaboration anywhere else,” adds Sowa.



For example, Carol Greco, associate professor emerita of psychiatry in Pitt's School of Medicine and internationally renowned researcher, is part of the behavioral core, along with Schneider. She weighs in on psychosocial factors that improve pain and functioning in persons with chronic disease. In the biomechanical core, Kevin Bell, assistant professor in the Department of Bioengineering in the Swanson School of Engineering, brings his knowledge of wearable devices that measure joint motions and activity of individuals with cLBP to complement his colleague Assistant Professor William Anderst's novel kinematics assessments from the Department of Orthopaedic Surgery.

Patterson serves as co-director of the informatics core for both cLBP studies along with Gina Pugliano McKernan, assistant professor, Department of Physical Medicine and Rehabilitation. Together they oversee data governance, monitoring, sharing and statistical analysis.

"Pitt fosters interdisciplinary collaboration through a culture that actively encourages and celebrates cross-disciplinary work," says Bell. "But what stands out most is the shared commitment of my colleagues. Each brings world-class expertise and a genuine openness to learning from one another. That spirit of collaboration is what makes this work possible and what will ultimately lead to breakthroughs in care."

THE RESULTS ARE (ALMOST) IN!

Data from the LB3P study is currently being analyzed even as the new H2P study begins.

Patterson, McKernan and Zhou are using artificial intelligence and machine learning models to analyze thousands of variables. "We are using both traditional clustering methods and novel methods to best understand the diverse sample of our low back pain participants," explains McKernan.

“In addition to identifying phenotypes, we are looking into identifying novel biomarkers that relate to the person's experience of pain and functional outcomes in response to treatments. It's a very exciting time for us,” says Sowa.

Nam Vo, professor, Department of Orthopaedic Surgery and the study's co-PI, says LB3P was a landmark study in terms of data collection. "Never before has anyone phenotyped such a large group of participants. And now we have the opportunity to let that data inform us in a new study that follows those same participants for another five years," explains Vo.

Piva, who led a team that recruited and retained participants for both studies, emphasizes the significance of this continuity.

"The first five years allowed us to identify phenotype clusters," says Piva. "Over the next five years we will observe how their pain evolves as well as how it relates to other chronic pain conditions."

Results of the original study will be published later this year, but Schneider says there appears to be distinct clusters that characterize patients. "Now we continue to follow them to see what type of treatments work best for people in each cluster."

"All of this is leading up to precision medicine—the ability to use a person's unique biological and physical makeup, as well as their psychological dispositions," continues Schneider. "It will take more time and additional funding, but it will eventually allow us to prescribe the most effective treatment for different individuals. And that's what every one of us is hoping to do."

Oh, the Places They Go!

There's no limit to the possibilities for PA doctoral graduates.



Kelly Nicholas

The job of a physician assistant/associate (PA) is demanding and fast-paced but at the same time, extremely satisfying. It is also a launching pad for even greater career advancement.

For 16 years, Kelly Nicholas (DPAS

'23) took pride in the medical, surgical and aesthetic care she provided patients as a PA in the plastic and reconstructive surgery and dermatology practices at UPMC where she worked. She also trained future providers as an adjunct faculty member in the Physician Assistant Studies program at the University of Pittsburgh. But she was up for a new challenge.

The Doctor of Medical Science (DMSc) replaced the Doctor of Physician Assistant Studies (DPAS) in 2024. Like its predecessor, it is a totally online post-professional program that opens doors to new professional opportunities. With her doctoral degree in hand, Nicholas was able to move into the role of a medical science liaison in breast aesthetics that allowed her to put her extensive clinical knowledge to work, supporting surgeon education and creating a scientific exchange around innovative implantable technologies and clinical data.

Associate Professor Mary Allias, director of the DMSc program, says the three-term doctoral program is designed to broaden the non-clinical skill set of practicing professionals. "We focus on health care quality improvement processes and practice-based learning."

"A job-integrated internship completed in the student's current place of practice, along with a scholarly practice capstone project make this degree meaningful and impactful so our graduates are ready to lead change and make improvements in health care," Allias continues.



Kelly Nicholas (left) collaborating with her DPAS classmates.

Nicholas says her capstone, which delved into the role of wellness in reducing health care worker burnout, greatly improved her project management skills.

"I learned how to manage time constraints and timelines, how to work with different stakeholders and get their buy-ins," she adds.

The degree also allowed Nicholas to accept a new position in the corporate world, as an advanced practice provider (APP) learning execution manager in dermatology at Johnson & Johnson where she helps translate complex immunodermatology science into clear, actionable learning strategies for the psoriatic team.

Her role bridges clinical expertise with strategic education—designing and executing impactful programs that enhance confidence in disease management, therapeutic decision-making and patient outcomes across the dermatology portfolio.

"I'm still very much using skills I learned in the doctorate program, just in a different role," says Nicholas.



Mary Allias



Hollie Rudolph assists in a robotic esophagectomy.

CAPSTONE LEADS TO IMPROVED PATIENT CARE.

Hollie Rudolph (DMSc '25), an APP for a thoracic surgery team at ChristianaCare Hospital in Newark, Delaware, said the lead surgeon in her practice group encouraged her to earn her doctorate.

“Advanced degrees are valued here,” says Rudolph. “And I felt I wanted to enhance my leadership skills. The DMSc program showed me how I can do more for my team.”

Rudolph’s capstone focused on increasing lung cancer screenings among high-risk demographics.

“Lung cancer typically doesn’t have any symptoms until it’s in an advanced stage,” she explains. “Yet it remains the deadliest cancer in the United States, with a higher annual mortality rate than breast, colon and prostate cancers combined.”



During her DMSc training, Rudolph developed a training program that is still in use today. It helps caregivers, including nurses and primary care providers, to better identify patients who qualified for low-dose CT screenings.

Rudolph says screenings at the hospital have increased from three per month to around 26. “Although the numbers look small, this is a 760% increase in monthly screenings,” Rudolph continues.

“Whenever we increase the number of screenings, we can improve the outcomes for patients who have early stage lung cancer.”



Rudolph, second from right, with her team at a lung screening event.

DMSc DEGREE LEADS TO TENURE TRACK.

Allias notes that the DMSc degree is a highly personalized one. Students are invited to select from three electives—administrative, academic and digital health fundamentals—that coincide with their specific area of interest.



Stephane P. VanderMeulen

Stephane P. VanderMeulen (DMSc '24) followed the academic track. As a PA educator for more than 20 years and the chair, Department of Health Professions at the Creighton University School of Medicine in Omaha, Neb., VanderMeulen understands the importance of keeping

up with the latest trends and best practices in her field. She is also aware that to become tenured at Creighton, she needed a doctoral degree.

The DMSc degree positioned her to achieve both of those goals.

“As a leader, we have to be constantly evaluating our students and our program,” says VanderMeulen. “I was searching for a tangible skill set that would help me with this task.”

According to VanderMeulen, the quality improvement aspect of Pitt's DMSc program was exactly what she was looking for. “The curriculum is top-notch and I definitely appreciated the online delivery of the program.”

VanderMeulen's capstone experience centered around peer feedback: teaching students how to deliver better feedback to one another and understanding the value of giving and receiving feedback.

Down the road, she hopes to advance her career in university administration, where she can apply even more of the knowledge she gained through the DMSc program. “Having a formal framework for developing a quality improvement process is helpful in your day-to-day work—no matter what field you're in,” explains VanderMeulen.

Allias agrees. She adds, “Every student has a unique goal in mind, and this degree can put them on the path to achieving it.”

DIFFERENT KIND OF SUCCESS — ASHLEY REASEY (DMSc '25).

Crossing the finish line of a race is a huge achievement and worthy of celebration. It was also important to celebrate finish lines in each semester. It's okay if the trail to the finish was rocky, what matters is continuing to choose to do the work to get there and overcoming any setbacks when they arise. Whether it was completing an assignment, finishing a draft for part of my literature review or finishing the semester, celebrating those milestones gave me a sense of accomplishment and fueled me for what was next for my capstone project.



Running helped me succeed during Pitt's DMSc program. It relieved stress, gifted me time in nature and reminded me of important lessons. I never thought running would provide me with the tools necessary to obtain my doctorate.

Pitt's DMSc program gave me a new appreciation for quality improvement and made the process doable. I was able to work full time while completing the DMSc program, and still had time for my family, friends and running. Since graduating, I've been promoted to Expert APP at UPMC and ran a 35K in Switzerland. Looking forward, I am excited to work on more projects that drive meaningful change.

Pitt's DMSc program left me hopeful. Physician assistants/associates are stepping up as advocates and innovators that are committed to improving health care for patients, providers and students. Just like running, the work is challenging and progress can feel slow at times, but every stride moves us toward the finish line we're all aiming for: better care.



Read Ashley's full story and learn how running helped her earn her DMSc.

Adaptation

Modifying the activity and environment to support independence and community participation for people with disabilities.

Healthier Routines Help Children with Down Syndrome Thrive.



Angela R. Caldwell's research helps to avoid rapid weight gain in children with Down syndrome.

Every one of us benefits from healthy routines. Proper nutrition, exercise and sleep—and even the decisions we make and the relationships we build—help us to live healthy and fulfilling lives. For children with Down syndrome and their families, these choices are not always easy or obvious. But researchers at SHRS are finding ways to help families develop healthy routines that support the needs of children with Down syndrome so they grow up healthier and are better able to thrive in the adult world.

Angela R. Caldwell, assistant professor, Department of Occupational Therapy, has always been interested in strategies to reduce childhood disparities. Early in her research career, she received an NIH Early Career Development Award to investigate the health behaviors of young children with Down syndrome and determine how to best help families develop healthy routines and prevent rapid weight gain observed during the preschool years.

“We know that children with Down syndrome have an increased risk for certain medical conditions, including cardiac and respiratory problems,” says Caldwell. “We also know they have a higher rate of obesity. But we don’t have tailored interventions to prevent this condition in a population with unique risk factors.”

Left: Angela R. Caldwell with patient, Theo.



Andi Saptono (left) and Caldwell (right) developed a mobile app to help caregivers track activities of their children with Down syndrome.

To address this issue, Caldwell began collecting data from parents and caregivers who were able to identify facilitators as well as barriers to healthy routines for toddlers (age 12-36 months) with Down syndrome. Together with Assistant Professor Andi Saptono, Department of Health Information Management, she developed a mobile health platform called EACH DS (Early Child Health: Down syndrome) that allowed caregivers to log key information about their kids’ sleep, physical activity, screen usage and eating behavior easily and accurately, at any time of the day.

“Our vision behind the app was to provide clinicians, such as physicians, physical and occupational therapists and speech-language pathologists, with comprehensive information about the child’s daily experiences without depending on their caregivers to remember and be able to recall everything about their kids prior to their regular visits,” says Saptono.

“We set health promotion goals with individual families,” says Caldwell. “By using behavior change techniques, we’re able to build healthy routines early, so everyone benefits from them throughout their lives. That is very rewarding.”

As a professor in the Department of Counseling and Behavioral Health, Chandra D. Carey has dedicated her career to supporting caregiver mental health and individual community engagement, especially among people of color with disabilities. As the mother of a child with Down syndrome, the intersection of professional expertise and lived experience isn't incidental; it's foundational.



Carey with her daughter, Kennedy, age 13.

“Having a daughter with Down syndrome has made me especially committed to focusing on mental health and everyday routines that support young people’s overall wellbeing and quality of life,” explains Carey.

Through a collaboration with the Down Syndrome Association of Pittsburgh and the Down Syndrome Center of Western Pennsylvania at UPMC Children’s Hospital of Pittsburgh, Carey participates in a program for teens with Down syndrome who may soon be heading to college or living on their own for the first time.

“Adulting 101—a Series to Empower Teens” consists of six two-hour sessions that cover topics ranging from physical activity and nutrition to social-emotional learning and self-advocacy. The program culminates in a festive celebration where participants are honored and reflect on their experiences with family.



Carey and Adulting 101 participants with their “Friendship” bingo cards.

Carey says “Adulting 101” supports teens with Down syndrome in exploring various paths to adulthood, self-determination and community inclusion.

“Like most teens, mental wellness for those with Down syndrome begins with self-acceptance, community and practical knowledge. We are excited to support teens and their caregivers during a crucial time for strengthening self-advocacy, autonomy and overall well-being,” Carey continues.

While this may be new territory for some teens with Down syndrome and for their parents, the series is designed to help them flourish in any environment they choose to enter.

“Our goal is to support their mental health so they can transition into adulthood with confidence and on their own terms,” says Carey. “That foundation can make all the difference on the road to a fulfilling life.”

According to the National Down Syndrome Society, all people with Down syndrome experience some cognitive delays, but the effect is usually mild to moderate and does not impede their ability to use their many strengths and talents.

“Education programs such as ‘Adulting 101’ support individuals with Down syndrome to engage more successfully in the world,” adds Carey. “But there’s also a need for more widespread public education and a broader cultural shift toward genuine inclusion and belonging.”



Classes support teens with Down syndrome as they prepare for adulthood.

Game Changers on the Sideline.

When the ball is in the red zone and the crowd noise is deafening, that's when the excitement begins. It's also when the people on the sidelines of athletic events are most at risk for sound-induced hearing loss—a permanent condition that is often accompanied by tinnitus or ringing in the ears.

“Coaches, team physicians, athletic trainers and others are directly impacted game after game because they are closer to the cheering fans and loudspeakers,” says Professor Catherine Palmer, chair, Department of Communication Science and Disorders (CSD) and director of audiology for the UPMC Integrated Health System.

“They are also exposed to these loud sounds over the course of their entire careers,” she continues.

Through the UPMC clinic, Palmer and students in the Doctor of Audiology (AuD) program work with various coaches, sideline personnel and athletes at both the college and professional level. They customize hearing protection that will work in noisy stadium environments, especially enclosed stadiums. High-quality musician earplugs, for example, work well because they lower the sound but keep it clear so these individuals can still communicate accurately.



Athletes may need several pairs of customized hearing aids that fit in helmets because they must be dehumidified after use.

Palmer says they also provide amplification solutions to athletes with hearing loss. They have to consider the helmets that will go over any type of hearing aid, the retention of the device even when the player is being tackled, and the moisture issues that arise when the player is perspiring throughout the game.

“For the helmet to be comfortable, we typically use a completely in-the-canal or invisible-in-the-canal hearing aid,” says Palmer.

“Having an accurate sense of the sounds around you impacts the way you navigate the game,” she adds. “It’s rewarding to help the athlete maintain this awareness and improve communication on and off the field.”



Leah Helou, CSD

assistant professor, notes that coaches and others who are always yelling from the sidelines can also develop phonotrauma, a cause of both long- and short-term voice difficulties that occurs when the vocal folds sustain impact injuries from heavy usage.

“It’s difficult to predict whose voice will be durable and resilient enough to bounce back after acute phonotrauma, so minimizing risks is important,” says Helou.

For people on the sidelines and in the stands who experience voice problems, Helou recommends consulting a laryngologist to diagnose the specific issue. This may lead to a referral to a Speech-Language Pathologist (SLP) for voice therapy services to help build a healthy foundation for voice use.

Chelsea Herdt-Dawson describes herself as a “professional talker.” In her roles as a kindergarten teacher, swim coach and national anthem singer, Herdt-Dawson realized she was overusing her voice. “My voice was so fatigued and exhausted by the end of the day, you could hear cracks in certain pitches and the volume of my voice was lower,” says Herdt-Dawson.

Her SLP gave her easy exercises to do throughout the day to warm up her voice, maintain it and then cool down. Herdt-Dawson says now she has a voice at the end of the day and is not as exhausted from speaking.

“Never underestimate the value of consulting an SLP,” says Helou. “They can explain protective techniques for loud voice use and help you set and maintain boundaries that keep you out of vocal trouble so you can keep on cheering.”



Herdt-Dawson sings the national anthem at a Los Angeles Angels game.

Eyes on the Future. Roots in the Past.

From Emergency Medicine to the City of Pittsburgh Chief of Police.



Since he was 5 years old, Jason Lando (BS '01) wanted to be a police officer. Growing up in Squirrel Hill, close to the City of Pittsburgh Zone 4 police station, he loved

to watch the police cars come and go. He could hardly wait to apply to the Academy—until he discovered that he couldn't become a police officer until he was 21.

He quickly learned that he could become an emergency medical technician (EMT) at age 18!

Lando set out to receive his EMT training and went on to paramedic school as soon as he turned 18. At that time, he decided to enroll in the newly established Emergency Medicine program at SHRS and work as a paramedic until he was old enough to become a police officer. Needless to say, his plan worked out well.

Fast forward to today. After working as a Pittsburgh police officer for 21 years, first as a beat cop and eventually as the commander of the bureau's narcotics and vice unit, Lando became the police chief in Frederick, Maryland. In Jan. 2026, he was welcomed back home as the new chief of police for the City of Pittsburgh.

“I greatly miss my EMS (emergency medical services) days,” says Lando, “But I love my career in law enforcement. I also believe my EMS experience helped greatly in preparing me for my work as a police officer.”

“At Pitt, I had the benefit of learning from some remarkable leaders in their field who were respected by both their subordinates and their peers—people like Tom Platt, Walt Stoy and Gregg Margolis,” he continues. “When I think back about what made them so remarkable, it comes down to their willingness to be present, teach and always model the behavior they wanted to see in others.”

In his current position, Lando strives to be that kind of leader. He also tries to be open to new challenges and encourages his officers to do the same.

“Looking back on my own journey, I would have to say that a willingness to try new things, think outside the box and keep an open mind are critical,” says Lando.”

“I was encouraged by some of my role models to take promotional exams and become more involved in working with the community. Looking back, I am so glad I listened to their advice as it completely changed the course of my career,” he adds.

“I cannot imagine where I would be today if I was not willing to take advantage of the opportunities that came my way.”



Leading by Example.

Mentee turns mentor as the new City of Pittsburgh Director of Public Safety.

Throughout his career, Sheldon Williams, adjunct assistant professor, Emergency Medicine program, has worn many hats. They have all prepared him for his recent appointment as the City of Pittsburgh director of public safety.

Williams' 18 years in the military trained him first as a combat medic, then an emergency management specialist. During his 13 years with the City of Pittsburgh as a police officer and paramedic, he served on the SWAT and bomb squads and earned certification in fire, hazmat and EMS.



“I have a firsthand knowledge of different disciplines,” explains Williams. “This cross training allows me to understand the workings of different bureaus and better collaborate with people at all levels in those offices.”

Williams credits his success to the mentors who have guided him throughout his career. He says John Moon, who was one of the original paramedics at the Freedom House Ambulance Service and later assistant chief of Pittsburgh's EMS, was the force behind him deciding to become a paramedic.

“John saw something in me that I didn't see,” continues Williams. “He created a pathway for me and now I hope to create similar onramps to attract others to the field of public safety.”

As the director of public safety, Williams leads teams from city bureaus including police, fire, emergency medical services and animal care and control. He also oversees offices that handle the city's bars and restaurants, movies and special events, like the recent NFL draft, group violence interventions and mental and community health. In all, approximately 2,400 city employees fall under his jurisdiction.

“I strive to be a servant leader—to model the behavior I expect out of others,” says Williams.

“I know that my decisions lead to many implications downstream for the people on my team,” he continues. “I would never ask them to do anything that I wouldn't do myself.”

Despite of his busy schedule, Williams continues to teach classes to students in the Emergency Medicine program, including a course on “Leadership in Health Care.”

“This is the first time that I am teaching students the very thing that I am doing every day in my job with the City of Pittsburgh,” notes Williams. “Without breaching confidentiality, I can share how I'm creating policies and procedures, building teams and strengthening programs that will benefit the residents of the city. It's very rewarding. I hope some of my students will use what they're learning and join me in the field of public service.”



How Baby Elephants Are Enhancing Health Care in Mozambique.



Gorongosa National Park, famed for its biodiversity and lush landscapes, is now the site of a remarkable science, research and conservation effort that improves the lives of its residents, both human and animal.

In Gorongosa National Park in the heart of Central Mozambique, ecotourism is on the rise. While more than 90% of its African elephant population was depleted during a 15-year civil war that ended in 1992, baby elephants are once again roaming the savannas of this beautiful country.

But that's not all.

Thanks to the Gorongosa Restoration Project (GRP), a public-private partnership between the Carr Foundation and the Government of Mozambique, Gorongosa National Park has been transformed from a post-conflict landscape into a global model of integrated conservation, science, education and community development. From the beginning, it was never just about wildlife; the goal is to restore and protect 2 million hectares of biodiversity while creating lasting prosperity for the 250,000 people who live there.



Now, in alliance with the University of Pittsburgh Health Sciences, the GRP is creating a comprehensive care system that empowers communities with knowledge, access and agency—turning health from a privilege into a right.

In Nov. 2025, Emergency Medicine Professor Thomas E. Platt, chair of the Department of Community Health Services and Rehabilitation Science, and Sheldon Williams, adjunct assistant professor and recently named City of Pittsburgh Public Safety Director, traveled nearly 30 hours to Gorongosa to teach an Emergency Medical Responder course to GRP team members.

“The students were fantastic,” says Platt. “They were hungry for knowledge and eager to learn. They took full advantage of the opportunities presented to them.”



Platt (top row, far left) and Williams (top row, fourth from left) celebrate the completion of the Emergency Medical Responder course with GRP team members.

They brought with them tools from the Emergency Medicine program—vital equipment necessary to train and function in the field, including CPR manikins and automated external defibrillators (AEDs). They wanted to increase local capacity to respond to emergency medical situations and to gather information about how to best adapt an American curriculum to meet the unique needs and limited resources of the area.

For 15 days, Platt and Williams trained 32 enthusiastic Mozambicans. They ranged from employees of the GRP communications office to park rangers and members of mobile health brigades.



“Once they understood basic concepts, they quickly began asking questions and practicing how standard procedures could be adapted in the local remote areas,” continues Platt.

For example, access to stretchers in the region is limited, so Platt’s students practiced ways to safely move a patient who might be in a splint over rough terrain or for a long distance without causing any further injury.

“Once they understood basic concepts, they quickly began asking questions and practicing how standard procedures could be adapted in the local remote areas,” continues Platt.

Students practice how to safely move a patient who might be in a splint over rough terrain.

While the curriculum includes a component dedicated to using AEDs, the Pitt team learned that no AEDs currently exist in the park. So, they provided the skills training with the “hope that future funding will subsidize more AEDs and the locals will already know how to use them,” adds Platt.

The instructions were well-received by the students.

“You can do things for people and to people, but the most successful projects are those you do with people,” observes Williams.

By starting with the GRP staff, this project is a first step in doing work with, for and by the people of Gorongosa.

During a weekend “Stop the Bleed” course, Platt and Williams taught additional life-saving skills to a group of eight Mozambicans. Among other things, they learned how to apply tourniquets and perform hands-only CPR.



Platt (center) and Williams (behind him on right) trained employees of the GRP communications, park rangers and members of mobile health brigades.

Jessica Griffin Burke, associate vice chancellor for global affairs, health sciences, is spearheading Pitt’s involvement in Mozambique and the GRP partnership. She has recruited faculty from across the schools of the health sciences to work with GRP staff and the people who live in the sustainable zones around Gorongosa National Park.



Scan the QR code to learn more about the Gorongosa Restoration Project.



GRP team member uses Pitt-supplied manikin to learn CPR techniques as part of an Emergency Medical Responder course.

“By partnering with GRP to revitalize the local health system, we are realizing the University of Pittsburgh Health Sciences’ global health expansion goal of establishing strong and deep relationships in low-resourced settings,” says Burke.

Pitt is committed to GRP for the long-haul. This is not a short-term clinic or relief effort. It is a generational investment in health systems change—designed to be both financially and operationally sustainable.

“This project aims to build a sustainable model for health care,” adds Platt. “By improving the health of the people who live around Gorongosa National Park, we open doors for them to work at a variety of jobs in and around the park, boosting their sense of pride as well as their financial stability.”

“The idea that safari tourism—including the opportunity to see baby elephants—will be used to fund health care projects in the area,” continues Platt. “It is truly remarkable.”

Companies and foundations have also pledged to continue to invest in Gorongosa and return a portion of their profits to the GRP.



A 30-hour trip to the other side of the earth gave Pitt's team the opportunity to share their knowledge with local health care providers and create a sustainable model of health care.



Lessons Learned.

Trip to Belize transforms

White sand beaches. Lush rainforests brimming with hundreds of species of mammals and birds. Spectacular waterfalls and remarkable ruins from the Mayan civilization. You might think Belize is a tropical paradise. But there is one thing sorely lacking—access to occupational therapy services.



Above: The service learning trip was initiated by OTD students to bring much-needed occupational therapy services to people of Belize.

Below: Rachel Romano (OTD '26), Shelby Ligo (OTD '26), Assistant Professor Erin Mathia, Bonnie Freiman (OTD '26) and Caroline Perry (OTD '26) at Monkey Bay Wildlife Sanctuary.



In Jan., four students from the Doctor of Occupational Therapy (OTD) program traveled to Belize with Erin Mathia, assistant director of the OTD program and assistant professor, to participate in a 10-day interdisciplinary project. They were part of a larger group of 46 other occupational therapy (OT), physical therapy and speech-language pathology students and faculty from Alvernia and Misericordia Universities.

“Our goal was to provide sustainable OT solutions that will improve the quality of the lives of residents in spite of limited resources, even after we return home,” says Mathia. “As an added bonus, we discovered that this trip also transformed the way our OTD students think about their future practices.”

Mathia says the group worked closely with community partners in Belize, such as Monkey Bay Wildlife Sanctuary, who helped them distribute flyers and accompanied them into towns where they could set up clinics. “We were not trying to ‘fix’ a certain condition,” she continues. “We were there to see what was preventing people from doing their daily activities and giving them strategies for moving forward.”



the way OT students will practice.

For example, students frequently adapted household items like bedsheets to be used in place of a leg lifter or bed ladder to help clients struggling with mobility.

Robin Zappin, assistant professor, Doctor of Physical Therapy program at Alvernia University in Reading, Pennsylvania, has been leading the Belize program for six years. She says the experience helps students develop adaptability and clinical reasoning in resource-limited environments. “They learn to think creatively and deliver truly patient-centered care, without relying on equipment. They also build genuine human connections.”

“Small, evidence-based interventions lead to profound outcomes,” Zappin continues. “These moments are not just clinically rewarding—they are deeply human.”

“One of the most important lessons I learned was how to adapt in the moment and develop strategies for families using very limited resources,” says recent graduate Caroline E. Perry (OTD ’26). “I learned how to listen carefully to the concerns of families and respond to their immediate needs without having a pre-established plan.”

Shelby Ligo (BS ’22, OTD ’26) agrees. “I learned so many things that cannot be taught in the classroom, especially the value of prioritizing client concerns to guide treatment sessions, rather than allowing my assumptions as a clinician determine the treatment I provide.”

The idea of the service learning trip originated with two OTD students after attending the 2023 Pennsylvania Occupational Therapy Association conference and hearing about the work of other universities in Belize. They came back to Pitt eager to initiate a similar program. Mathia and Professor Pamela Toto provided the support and tools they needed to make their dream become a reality—and begin what they hope is an annual opportunity for OTD students.



Rachel Romano (BS ’22, OTD ’26) recalls one experience that changed her view on the impact of an occupational therapist.

“I was working at a pop-up clinic in the Orange Walk area of Belize,” recalls Romano. “One client with autism came with his mom. He was holding his hands over his ears and appeared to be dysregulated. We had brought various sensory items and adaptive tools with us from Pittsburgh, including noise-cancelling headphones. At this point in the week, we only had one pair left and they were pink, but I brought them to the client and put them on his head. Immediately, I could see the way that his world shifted as he became calm and regulated. Throughout the rest of the session, as we talked, the boy was able to sit quietly and listen and engage with us. He looked at me frequently, smiling and giving me a thumbs-up. This experience showed me that even the most simple or basic solutions can have a tremendous impact on a client who does not typically have access to these resources. This and the gratefulness shown by the people in Belize shifted the way that I practice as an occupational therapist.”

This year's cohort of students participated in an interdisciplinary online course with students from the other universities in the fall semester, prior to their trip. Among other things, they learned about the culture of Belize, how to practice cultural humility and how different disciplines can work together to benefit the client.

“However,” adds Toto, “having the opportunity to work collaboratively with other disciplines while they were in Belize and to learn how each member of the team brings a unique perspective was eye-opening for the OT students.”

“Interdisciplinary collaboration allows for the highest level of individualized care for each patient,” explains Romano.

“When working closely with other disciplines, like physical therapy and speech therapy, I appreciated being able to share ideas, learn different perspectives to providing care and narrow the scope of my practice to target specific client needs,” continues Ligo.



Pitt OTD students worked with Alvernia Physical Therapy and Occupational Therapy students to provide helpful strategies for accomplishing daily activities for a Belizean patient.



A session with Pitt OTD and Alvernia Physical Therapy students focused on energy conservation strategies to alleviate knee and lower back pain, exercises to strengthen knees and lower back, and education on orthostatic hypotension.

Perry notes that although it wasn't always possible for all members of the team to evaluate clients at the same time, they communicated with each other continuously. “For example,” says Perry, “While speaking with a client's family, one of the speech-language pathology students recognized potential sensory concerns and asked me to join the conversation. Because we had collaborated before, she knew I could provide occupational therapy insight. Experiences like this highlighted the importance of teamwork and shared knowledge in providing effective care.”

This was the second year that Pitt OTD students participated in the Belize project, but Mathia hopes it will not be the last.

“This is important work and all of us were both grateful and humbled to be able to contribute to it,” concludes Mathia. “The connections we made with the people of Belize as well as the interprofessional network we built with other faculty and students will impact how each of us practices in the future.”

“Changing lives through both skill and compassion.”



These words were penned by M. Kathleen Kelly, associate dean for academic outreach and advising, in a letter to nominate Kevin Conley for the 2026 Chancellor’s Distinguished Public Service Award.

Anyone who has been around Conley knows he is more than deserving of this award, which was presented on March 31, 2026.

During his more than 30 years at the University of Pittsburgh, Conley has consistently elevated his students, his colleagues and members of the community in unprecedented ways.

When he accepted a position as an athletic trainer for the Pitt football team in 1993, Conley had no idea where that journey would lead. After completing his PhD, he became director of the Athletic Training program, later associate dean for undergraduate studies and now chair of the Department of Sports Medicine and Nutrition and professor.

“When I came to Pittsburgh, I didn’t expect to be here for so many years,” notes Conley. “But now this is home. It’s where my family grew up. My son is a Pitt sophomore and my daughter will be an incoming freshman in the fall. We’re totally a Pitt family.”



Kevin Conley, chair of the Sports Medicine and Nutrition Department, encourages a Special Olympics athlete during the Project ALL STAR event.



Special Olympics
Pennsylvania

Conley admits he loves teaching and the energy that comes from being around young people. “I love seeing the lightbulb going off in a student’s head,” explains Conley. “It’s nice to see their evolution from novice clinicians to budding professionals who really have a handle on what they’re doing.”

Throughout much of his career, Conley has extended his expertise beyond the classroom to benefit the broader community. There is no better example than his work with Special Olympics, where he currently sits on the Board of Directors for Special Olympics Pennsylvania.

It started in 1996, when Conley volunteered to be a first responder for a Special Olympics basketball event at Fitzgerald Field House.

“I got students involved, too, because it was a great opportunity for them to work with a different population,” recalls Conley.

Students aren’t the only ones he got involved. By the following year, Conley was reaching out to different units across the University to support the Special Olympics events. He recruited people from facilities management, parking, athletics and security. Before long, he was invited to join the management team for Special Olympics in Allegheny County, a group of volunteers who helped with fundraising and overseeing various events.



He served as a member of the medical staff for Team USA at the Special Olympics World Summer games in Greece in 2011 and as the co-medical director for Team USA for the winter games in Korea in 2013.



“It was a great experience, being on the international stage,” says Conley. “The best part was being able to interact with all the athletes—to see the joy they get from competing and the absolute gratitude they show you—it’s very rewarding.”



Andrew Fee, vice president, Strategic Partnerships, Special Olympics Pennsylvania, praises Conley for his involvement with the organization.



“Kevin’s invested in so many different areas of Special Olympics,” says Fee. “But his biggest impact is how he has moved health and fitness forward in the organization. He’s made it a priority on the Board, and that has impacted all of the athletes—more than 15,000 of them in the state right now.”



To bridge scholarship with meaningful community impact, Conley eagerly agreed to offer the University of Pittsburgh as a host school for Project ALL STAR, a collaboration between Special Olympics International and four state Special Olympics programs: Pennsylvania, Minnesota, Wisconsin and Arizona.

Thirty-six Pitt student volunteers worked with Special Olympics athletes to begin collecting longitudinal data about how the program impacts their physical, social-emotional and mental health.

This longitudinal research study seeks to measure the impact of Special Olympics participation on the physical and mental health of athletes over time.

Athletes come to Pitt once a year to go through a series of different physical fitness assessments. Conley and his team, including student volunteers, collect data to see if and how the athletes' numbers have improved with their involvement in Special Olympics programming.

“Our goal is to add more and more athletes every year so we can get a more comprehensive picture of what participation in Special Olympics looks like and how it impacts health and wellness,” explains Conley.

His work with Special Olympics spills over into the classroom. “The more exposure we can provide our students, the better and more confident they feel in interacting with patients who have special needs.”

“If you want to understand Kevin Conley’s leadership, look beyond the department,” says Mary Murray, director of clinical education for the Athletic Training program and associate professor. “His involvement with Special Olympics reflects a person who leads from a place of genuine care for others. That passion is visible and consistent, and it sets a quiet but powerful example for faculty, staff and students alike about what service actually looks like in practice.”

“Dr. Conley’s recognition reflects the very best of SHRS,” adds Former Interim Dean David C. Beck. “His work exemplifies how faculty experience can be translated into meaningful public impact, improving the health and well-being of individuals with intellectual and developmental disabilities while preparing the next generation of clinicians to provide equitable, compassionate care.”

Pitt student volunteers work with Special Olympics athletes as they complete data collection exercises during Project ALL STAR.





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School of Health and Rehabilitation Sciences
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