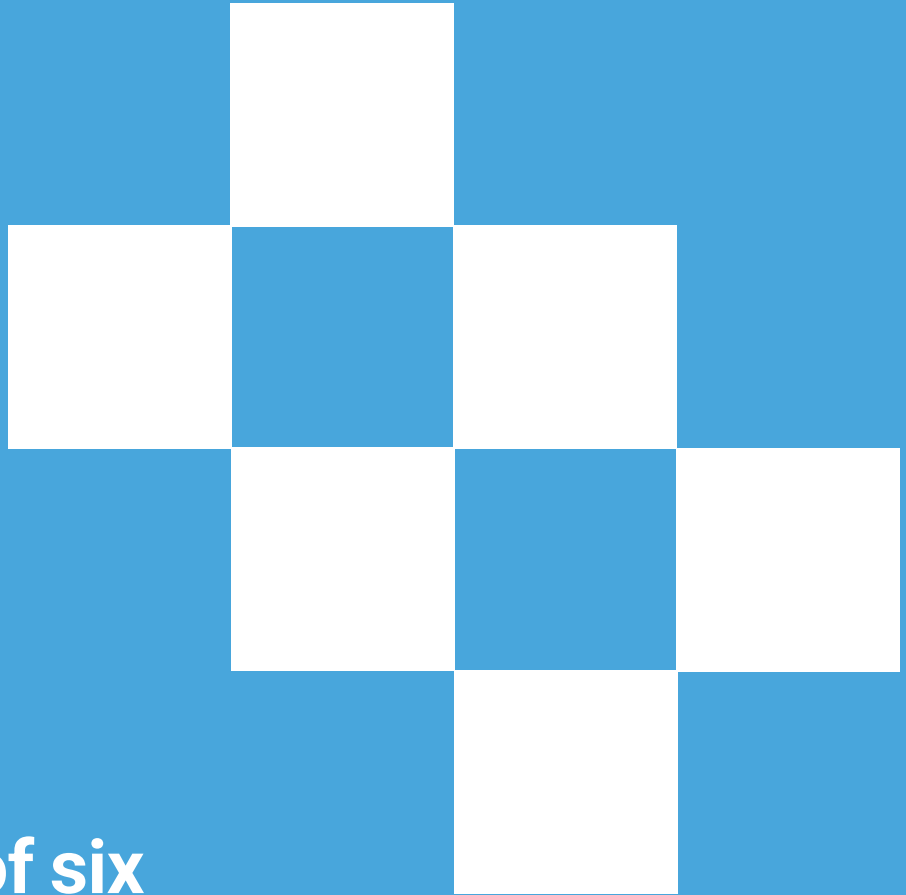




The strength of six

*Pitt's powerhouse health sciences schools
advance health in every way possible.*

Dental Medicine

Health and
Rehabilitation Sciences

Medicine

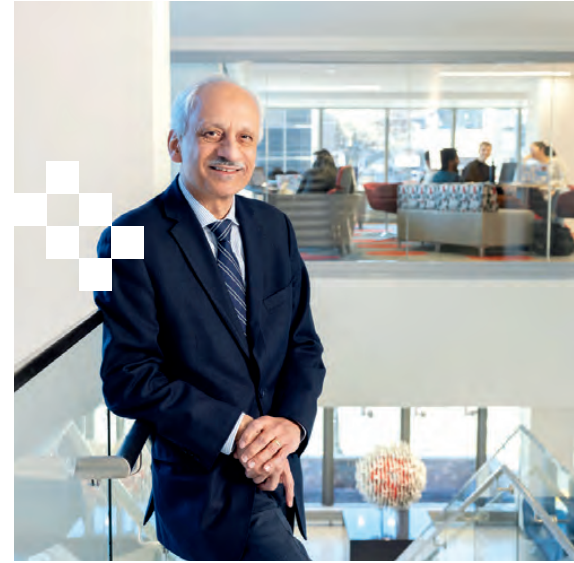
Nursing

Pharmacy

Public Health

The strength of six

- 2 **Points of pride**
What inspiration looks like,
to the power of six.
- 4 **Top-notch training**
Preparing the healers, scientists
and health science leaders of
tomorrow.
- 10 **Launchpad of possibilities**
Deep into the backwoods or into
the cosmos, we'll go where needed
to find answers to pressing health
problems.
- 12 **Collectively curious**
Astonishing progress happens
when our researchers come
together.
- 20 **Inspired and inventive**
We're focused on solutions that
heal and keep people healthy.
That's healthy for the economy, too.
- 24 **Caring and connected**
A spirit of yes propels us as
we work for better health for all.
- 28 **Our drive to do good**
Our faculty and students are
hitting the road to make sure
no one is left behind.
- 30 **Neighbors, near**
We learn from our neighbors
when we partner with them.
- 34 **Neighbors, far**
Global alliances transform us.
- 35 **Six great schools**
Get to know us.
- 48 **Champions and partners**
A catalyst for good across
Pennsylvania and beyond.



THE STRENGTH OF SIX

What is the strength of six? It's six health sciences schools coming together to radically change health for the better. To approach health from every angle.

Since joining the University of Pittsburgh in June 2020, during some extraordinary times both on campus and in the world, I continue to be impressed by the character our students, faculty and staff demonstrate. They have heart, not just smarts. And that affords us certain advantages.

Pitt people are more likely to care enough to try another approach. They are more likely to share ideas and expertise. They are more likely to have the humility to reach out to a colleague in a different field for another perspective. All that adds up to a community that's able to unlock new treatments, to imagine what's never been considered, to develop new models of care and to reach people we haven't reached before.

This report illustrates some of the fascinating ways that's happening across the health sciences. I hope you'll take a little time with it.

To keep our momentum, our team continues to grow by building new partnerships—that's the power of six and then some. Join us.

Anantha Shekhar, MD, PhD
*Senior Vice Chancellor for the Health Sciences
John and Gertrude Petersen Dean, School of Medicine*

SIX POWERHOUSE SCHOOLS

Every one of our six health sciences schools is a center for academic and research excellence. When we team up, the sky is the limit.

Dental Medicine

Health and
Rehabilitation Sciences

Medicine

Nursing

Pharmacy

Public Health

6,780

Total enrollment

7,101

Total faculty,
researchers and staff

172

Academic programs

Among the best

U.S. News and World Report rankings
**School of Medicine ranks Top Tier
for research**

Several programs and specialties
ranked nationally in top 20,
for instance:

2nd Nursing-Anesthesia

3rd* Occupational Therapy

5th* DNP Nurse Practitioner:
Psychiatric/Mental Health,
Across the Lifespan

5th* Audiology

5th* Speech-Language Pathology

8th* Nursing, BSN

9th* Pharmacy Schools

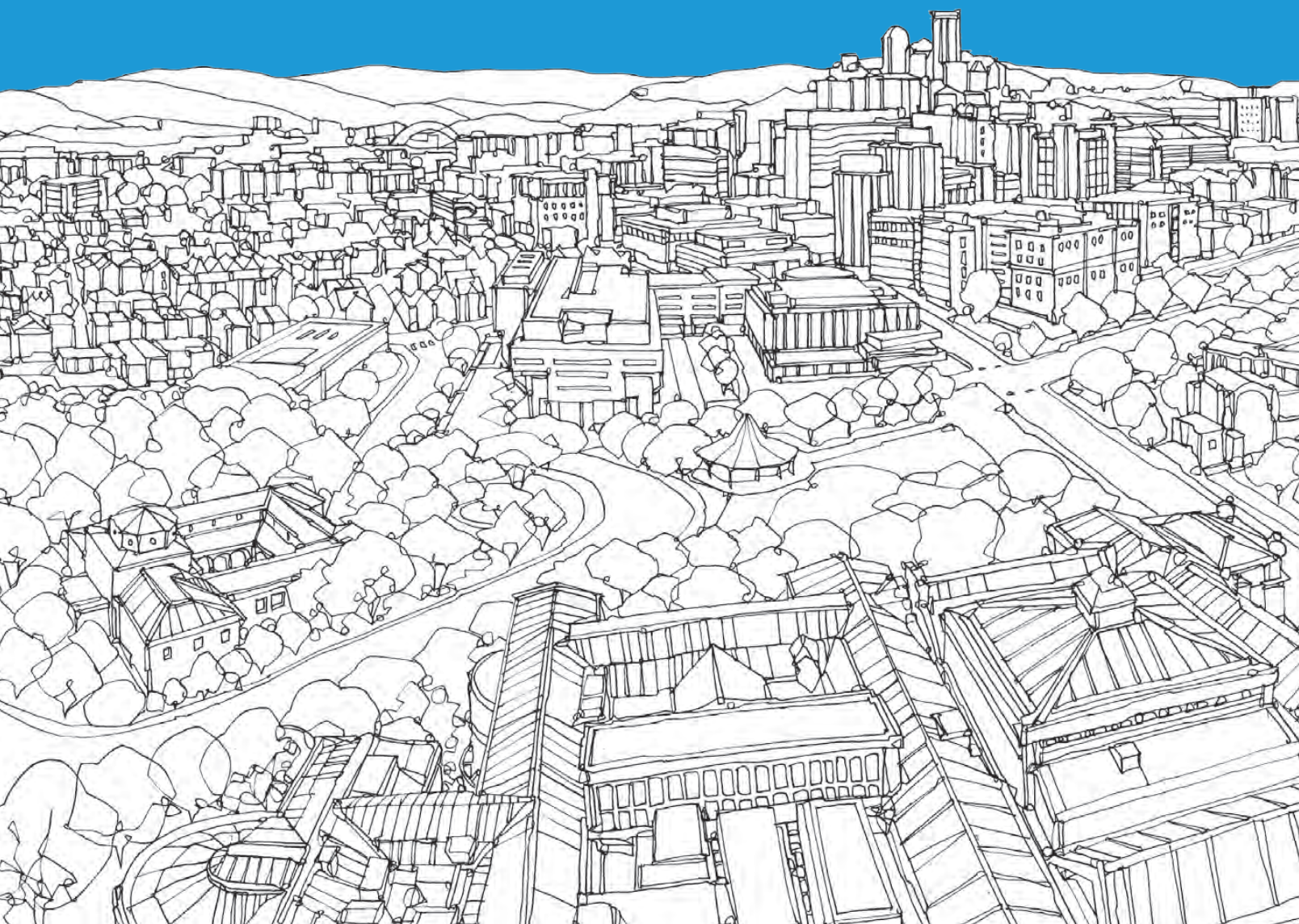
9th Physical Therapy

13th Biostatistics

15th* Environmental Health Sciences

16th* Public Health Schools

Metrics are from 2025 unless otherwise noted.
*Denotes a tie



7 subjects ranked globally by U.S. News in top 30 based on research and reputation.

Surgery is ranked 7th, Infectious Diseases is 17th, Immunology is 19th.

Leading minds

4,879 active research awards.

5 National Academy of Sciences Members

11 National Academy of Inventors Fellows

20 National Academy of Medicine Members

Research might

Top 2% of U.S. universities in externally funded R&D expenditures (\$1.2 billion); health sciences accounts for nearly 82% (\$982.6 million) of Pitt's total.

25 years in the top 9 most funded institutions

by the National Institutes of Health (NIH).¹

Ranked 7th in NIH funding

to universities (\$669.7 million).

All six health sciences schools are in the top 20 for NIH funding. Four are in the top 10.

The Department of Psychiatry ranked No. 1 for the 14th time in the past 20 years. It ranked No. 2 the other six years.

¹ Pitt has ranked in the top 9 since 1999, except for ranking No. 11 in 2021.

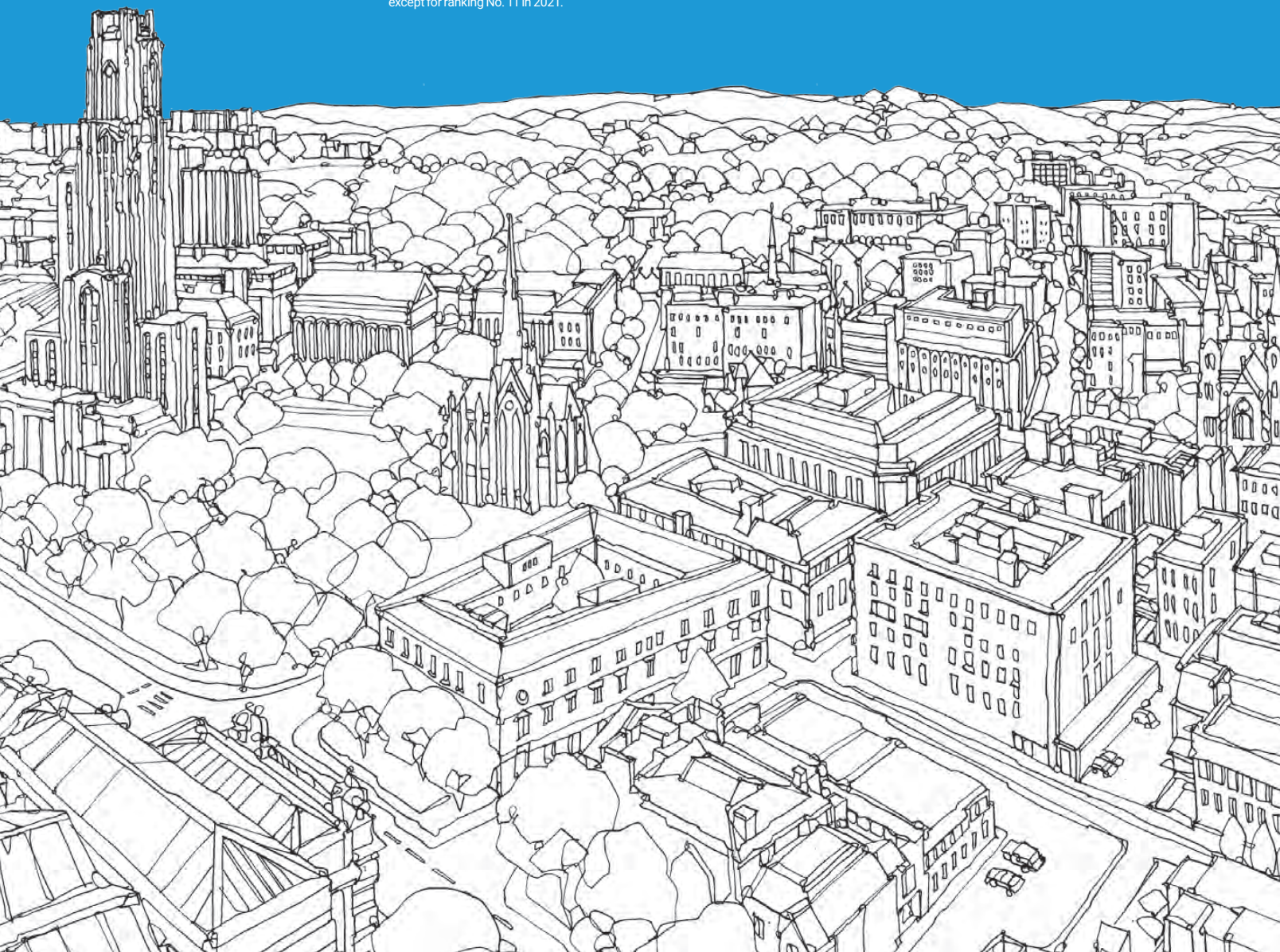
National news coverage

The most respected media outlets look to Pitt experts for breakthroughs and understanding. The ranking for story placement in top-tier media outlets for Pitt Health Sciences rose to 5th in 2025 among peer institutions. In FY 2025, health sciences faculty here were featured more than **500 times** in outlets considered top tier for their coverage of medicine and health sciences. Those outlets include NPR, "PBS News Hour," National Geographic, CNN, the Associated Press, The Atlantic, The New York Times, The Wall Street Journal, Time, Science, Scientific American, Nature, among others.

Partner pride

UPMC, an international health care leader, operates **more than 40 hospitals and 800 doctors' offices** and outpatient centers. It consistently ranks among the best hospitals in the nation. As the University's primary clinical partner, it is deeply integrated with Pitt Health Sciences programs.

The VA Pittsburgh Healthcare System is also a critical clinical and research partner, offering investigators many opportunities for support and collaboration, including four centers of excellence.



TOP-NOTCH TRAINING

At our six top-ranked schools, our students and trainees think like scientists and leaders. They learn from each other, as well as from our supportive and esteemed faculty, so they can shape and champion a healthier tomorrow for all.

CRITICALLY CONNECTED

The best clinical training includes interprofessional experiences.

In hospitals and clinics, health care professionals from a variety of fields perform an intricate dance: Nurses, physicians, EMTs, pharmacists, occupational therapists and others collaborate to provide effective care.

But all too often, while in school, students training for clinical careers have limited opportunities to learn alongside colleagues from other care disciplines. That's why the University of Pittsburgh Health Sciences is expanding its interprofessional education efforts by building teamwork and communications skills among students from all six of its health sciences schools, as well as the School of Social Work.

**"THEY WILL BUILD
EARLY PROFESSIONAL
RELATIONSHIPS AND
FRIENDSHIPS ACROSS
SCHOOLS."**

PAUL WALLACH

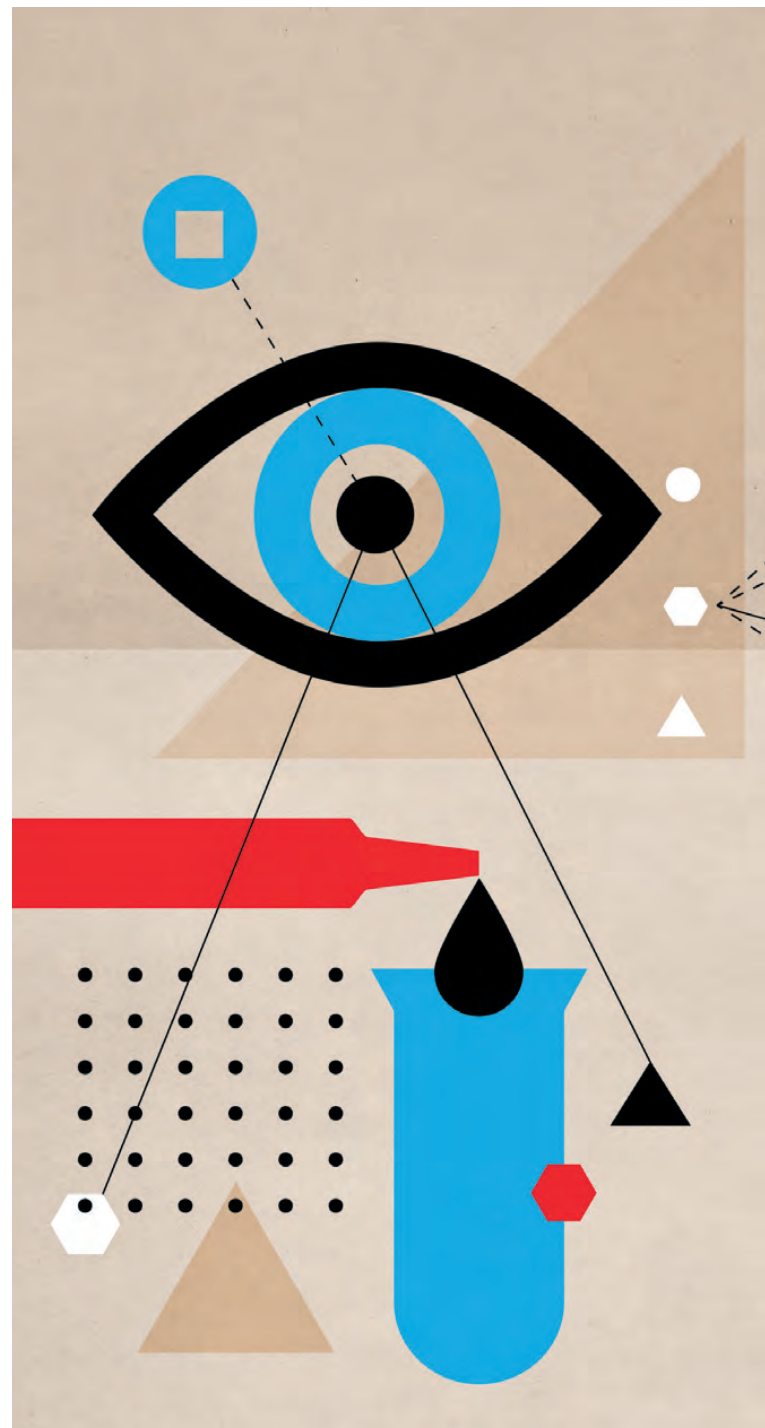
"It's essential that our students graduate with the ability to collaborate across multiple fields, as they will do throughout their careers," says Paul Wallach, vice chancellor for health sciences education.

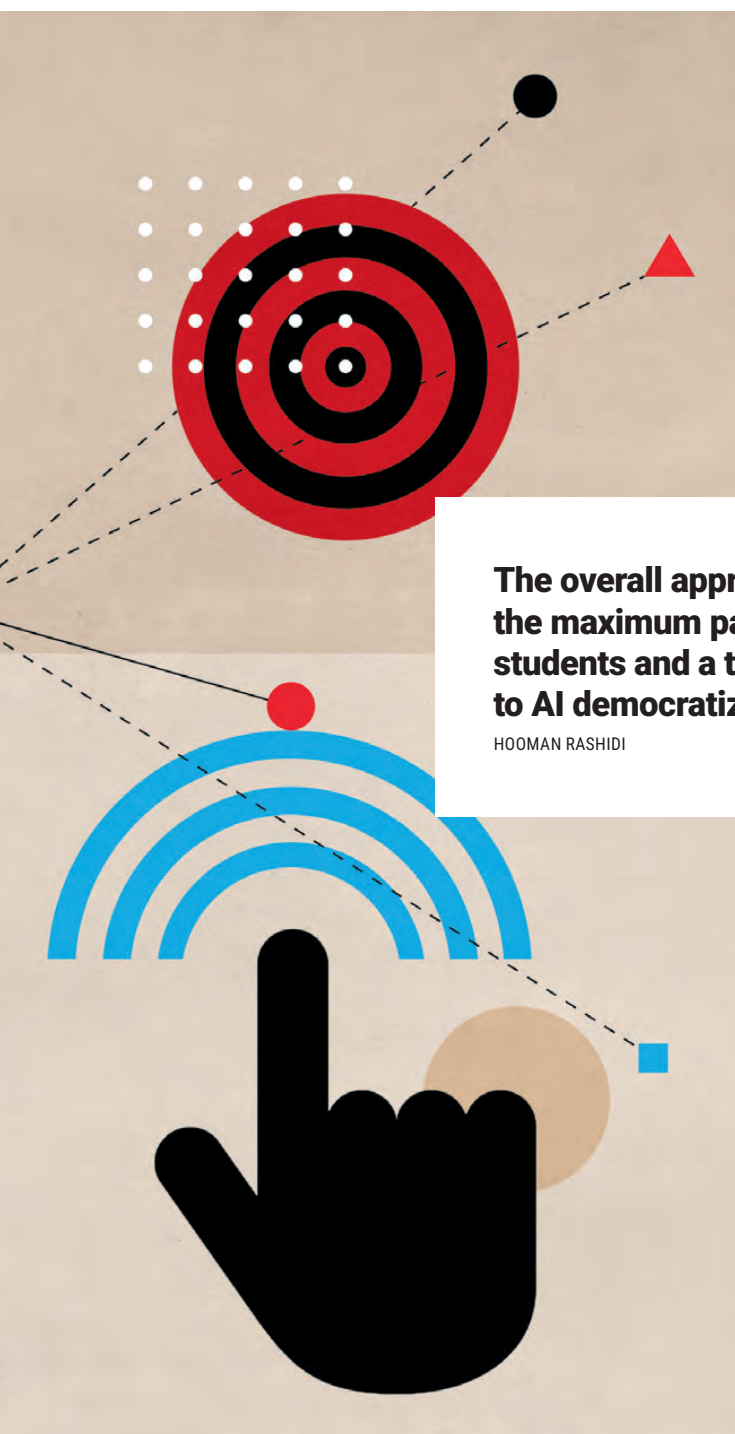
The program is building on the existing annual interprofessional forum that Pitt has held each fall for over a decade and will also offer small group sessions focused on patient-centered teamwork. Sessions offered in spring 2026 on sustainability and misinformation were in such high demand that many students were sent to a waitlist.

That same semester, the program will host a peer-to-peer skills fair during which advanced students teach other students skills such as suturing, depression screening, and naloxone and AED administration.

In these settings, says Wallach, "they will build early professional relationships and friendships across schools.

"This is phase one. There's more to come."





The overall approach “will ensure the maximum participation of all students and a true path forward to AI democratization.”

HOOMAN RASHIDI

EDUCATING AI-SAVVY CLINICIANS

Students will be equipped for a changing landscape.

At Pitt and elsewhere, artificial intelligence is employed for drug discovery, in preventing the spread of hospital infections and in reducing the administrative burden of clinicians.

Anantha Shekhar, Pitt’s senior vice chancellor for the health sciences and the John and Gertrude Petersen Dean, School of Medicine, has taken steps to ensure tomorrow’s physicians and scientists understand how AI is shaping medical care and how to best use it.

He and Liron Pantanowitz, the Maud L. Menten Professor and chair of the Department of Pathology, recruited Hooman Rashidi, who has built his career around AI, to serve as Pitt Med’s associate dean for AI in medicine and make the University a world leader in AI literacy.

Rashidi, whose love for teaching comes through in any conversation with him, brings a breathless enthusiasm to Pitt’s plan to be an AI epicenter. The type and scale of the education that Pitt provides will differentiate it, he says.

Pitt’s approach to making sure its medical students are equipped for this changing landscape is rooted in a new curriculum. It started in 2024 with a series of “must know” lectures delivered by Rashidi, who also has worked with more than 40 other health care experts from across the country to create a seven-part open-access article series on AI for Pitt and the global community. The series focuses on how AI is reshaping pathology and lab medicine.

In 2026, Rashidi will introduce a fully self-paced and interactive AI elective course called Pitt-AI-cademy—a collection of more than 25 fully interactive AI education apps. Those apps will all be under one umbrella to make it a seamless and engaging educational experience. Students will not need coding experience or a machine learning background to take the course.

“The point of the self-paced elective is to get you excited in the first 20 minutes, see how easy it is to build [these tools].” And then to consider: “What’s the proper study design? What are the statistics, regulatory aspects, ethical aspects, [because that’s] what matters the most.”

The overall approach “will ensure the maximum participation of all students and a true path forward to AI democratization,” says Rashidi.

He envisions offering similar workshops and other educational opportunities to already practicing physicians and scientists and to students and professionals in other health sciences fields.



Overlooking the suburbs of Johnstown, Cambria County

TRAINING WHERE THEY'RE MOST NEEDED

Dental centers bring care and opportunity to Titusville, Johnstown and Bradford.

The barrier to good oral health has grown much bigger than remembering to floss.

A recent study by the National Institutes of Health found nearly 25 million people in the United States live in an area where there aren't enough dentists to serve the needs of the population. In Pennsylvania alone, 1.5 million residents live in areas facing a dental care shortage. Patients in those areas are forced to forgo basic oral health care or travel hours to reach the nearest dentist.

But Pitt's School of Dental Medicine will bring comprehensive dental care and training directly to underserved regions.

Set to launch in Titusville, Bradford and Johnstown, Pennsylvania, in 2026 and 2027, Pitt's rural dental expansion is more than just a mobile clinic or temporary outreach program: It's a replicable model for sustainable, community-rooted care. Through a partnership with Titusville Area Hospital and the Pitt-Titusville Education and Training Center, the initiative will establish a

"We're creating a pipeline to retain local talent and expand access."

KELLY WAGNER

regional training site that functions as a clinic and a classroom in Titusville in July 2026. Likewise, a Bradford site will be created in partnership with the University of Pittsburgh at Bradford, Universal Primary Care (UPC) and Olean General Hospital. The program began offering routine dental care at UPC in January 2026 from UPC staff; dental residents will provide care starting in July 2026. The following year, Pitt Dental Medicine expects to open another center in Johnstown.

These sites will operate as mini-clinics, staffed by dental hygiene students, dental assistant trainees and residents from Pitt Dental Medicine's General Practice Residency Program (GRP). The idea is that students will train in their own communities, and some will complete didactic coursework online, so they can both learn and potentially land a well-paying job near their homes.

"We're creating a pipeline to retain local talent and expand access," says Kelly Wagner, assistant professor and assistant dean for clinical administration and quality care, School of Dental Medicine.

DMD student Christiana Mather will be moving to Titusville, with her two cats and fiancé, shortly after her graduation from Pitt in May 2026. She'll be one of three GRP dental medicine residents training there and notes that she'll be part of a team "spearheading oral health and hygiene efforts for the community."

"How often do you get a public health opportunity like that?" she asks.

OH, THE PLACES THEY'LL GO!

Pitt pharmacist grads are team- and practice-ready from Day 1.

When it came time to decide upon a career, Rebecca Kendersky had no problem making up her mind. Her mother and brother both had graduated from Pitt's School of Pharmacy. She had been drawn to the work for most of her life. Yet, after her admission to Pitt Pharmacy, Kendersky realized that she didn't know what specialty she wanted to pursue.

"ONE OF THE GREAT THINGS ABOUT [THE PROGRAM] IS YOU GET AN INCREDIBLE AMOUNT OF EXPOSURE TO THE PLACES YOU CAN GO WITH A PHARM.D."

REBECCA KENDERSKY

The school's Experiential Learning Program helped her orient herself. "One of the great things about [the program] is you get an incredible amount of exposure to the places you can go with a PharmD," she says.

Pharmacists have emerged as frontline health care providers and integral members of complex, inter-professional teams. "We want to prepare students to provide patient-centered pharmaceutical care and be practice-ready and team-ready upon graduation," says Susan Skledar, professor of pharmacy and therapeutics and director of experiential learning and continuing professional development at Pitt Pharmacy.

The first year of the experiential program develops students' core practice skills. That includes understanding the many factors that influence health within a community, encouraging public health through wellness and disease prevention programs,

and developing communication skills with patients from diverse populations. Second-year students focus on community pharmacy practice.

Kendersky built on that training and more in one of her final-year experiential learning rotations, which took her to a Native American reservation in New Mexico.

"We lived on the reservation for five weeks, counseling patients just like how pharmacists do everywhere else," she recalls. "But the resources were very scarce. That challenge created some unique situations that we worked through as a team."

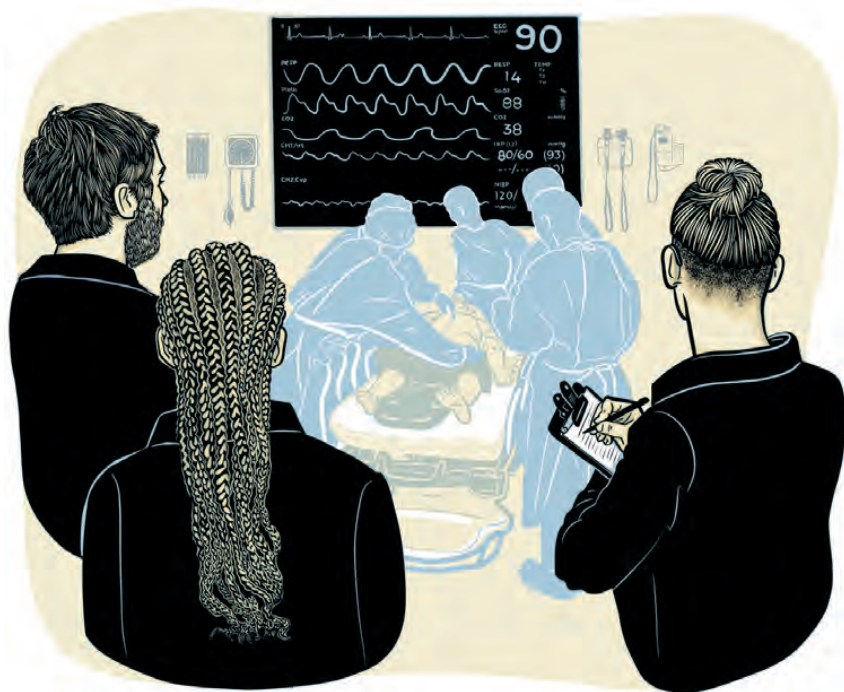
Kendersky learned to meet patients where they are and to collaborate not just with colleagues but also with patients to achieve the best outcomes.

In Pitt's program, third-year students are expected to take these kinds of new understandings into a health-system setting. Kendersky did so at her rotation at UPMC Children's Hospital of Pittsburgh. The outcome surprised her.

"I'll be honest. Working with children was not on my radar at all," she says. "But when I realized that every medication I touched was helping a child get out of the hospital, then I knew this is where I was meant to be."

"Even if I was just dosing some Tylenol, I knew I was helping a child get back to their Halloween, get back to their prom or just get back to their home."

Kendersky is now a clinical pharmacist specializing in acute care with a focus on pulmonology and nephrology at Children's Hospital of Philadelphia—and also part of Pitt Pharmacy's expert team of preceptors for student learning.



So real, but not

Imagine you were a med student, and you walked into what seemed like a hospital—yet almost everything, including the patients, was simulated. That's the idea for the expansion of the Winter Institute for Simulation, Education and Research (WISER) site on Alan Magee Scaife Hall's third floor. The first phase of the space opened in early 2024 and focused on integrating the School of Medicine's Three Rivers Curriculum with advanced simulation technology. For its second phase, WISER will offer more advanced, critical care courses and include fully simulated ICU, surgical and emergency rooms. **There will even be actors playing the roles of family members in a waiting area.** Designed with input from clinicians, the space mimics a hospital environment where students can safely practice critical skills—from delivering babies to breaking difficult news.

WISER has been educating students and trainees across the health sciences at various sites for more than three decades and continues to do so. The new Scaife site will focus on med students first and eventually serve as a test bed for new simulation approaches and tech for training other health professionals.

CHIROPRACTIC PROGRAM USHERS IN NEW ERA

An evidence-based doctoral degree

More than 35 million Americans see a chiropractor every year.

That's a good thing. Chiropractic care can alleviate back and neck pain, improve mobility and endurance, get people back to work or school sooner, and, often, reduce dependence on opioids.

But until now, training for chiropractors has been limited to private, specialized institutions.

In the fall of 2025, the University of Pittsburgh welcomed its inaugural cohort of students enrolled in its new Doctor of Chiropractic (DC) program. It is the first and only program of its kind housed in a research-intensive public university in the United States.

Michael Schneider, DC program director and professor, says the program promises to deliver a new breed of patient-centered, evidence-based chiropractors who will provide high-quality and high-value care.

As part of the Department of Community Health Services and Rehabilitation Science at the School of Health and Rehabilitation

THEIR "WIDE VARIETY OF ROBUST CLINICAL TRAINING OPPORTUNITIES IS UNPRECEDENTED IN CHIROPRACTIC EDUCATION."

MICHAEL SCHNEIDER

Sciences, Pitt's DC program follows an eight-term, multidisciplinary curriculum taught by expert faculty that includes chiropractors, physicians, physical therapists and other practitioners. In addition to diagnostic and communications skills, students learn to be essential

members of a health care team and leaders in their field.

What's more, they begin seeing patients in clinical settings during their first semester. Their "wide variety of robust clinical training opportunities is unprecedented in chiropractic education," notes Schneider.

"Leveraging the University's reputation for academic excellence and collaboration across disciplines, the chiropractic program can offer rigorous academic training, clinical experiences and research opportunities, ensuring that graduates are well prepared to excel," says Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean of the School of Medicine.

LEARNING TOGETHER

Med school curriculum fosters collegiality and connection.

Since Pitt's School of Medicine launched a new curriculum in fall 2023, administrators and faculty have been learning just as much as the students.

The Three Rivers Curriculum shifts med students' preclerkship education away from lectures and toward small-group settings and case-based learning, with an emphasis on interaction with classmates and educators. Over the last two years, students have served as partners in the curriculum's ongoing evolution and improvement.

On "Feedback Fridays," randomly selected students join faculty and administrators over lunch to reflect on the previous week.

"It fostered a lot of community," says

Abby Yohannes, who, as a third-year student, is part of the inaugural Three Rivers Curriculum class. She enjoyed the experience so much that she became a curriculum committee representative, elected as a liaison for her classmates' ideas and questions.

Abbas A. Hyderi, vice dean for education in the School of Medicine, says opportunities like Feedback Fridays tell students, "Your voice matters."

And yet, Yohannes says, "By the end of our first year, Feedback Friday was still super helpful, but a lot of my classmates didn't need it." They felt comfortable going directly to course directors or curriculum committee reps.

The curriculum's wide-ranging changes meant plenty of uncharted territory that first year. In the new format, "longitudinal educators" instruct students throughout multiple courses, drawing on material provided by "content leads" who are experts in each subject.

"We had one content lead who would come around to the small groups, pop in and listen to the conversation and provide extra tidbits," recalls Katie Maietta, assistant dean for education administration. "No one told him to do that—he just did it on his own." After students shared their appreciation, in-class contributions from content leads became a formal part of the curriculum.

Students have also been eager to share feedback about the Community Alliance Program, which connects students to community organizations and became a requirement for all students under the new curriculum.

Two years in, says Jason Rosenstock, associate dean for medical education, students in the new curriculum have been just as successful as their predecessors in their Step One exams and in preparedness for clerkships—no small feat considering the growing pains that come with a major overhaul. On top of that, Rosenstock says, "It's created an environment that has significantly improved the level of collegiality and connection in our community."

Did you know?

Fall 2023 saw the launch of Pitt Med's Primary Care Accelerated Track (PCAT), a **three-year path to an MD** that encourages outstanding future physicians to pursue careers in primary care specialties.

"It fostered a lot of community."

ABBY YOHANNES

NURSE BSN SCHOLARS

Pitt is known for educating nurse scientists and starts them early.

At Pitt, undergraduate students working toward a Bachelor of Science in nursing (BSN) have the opportunity to conduct research in critical areas of human health. While experiences like these are typically reserved for graduate school, the School of Nursing's Undergraduate Research Mentorship Program (URMP) matches students to faculty-led research projects.

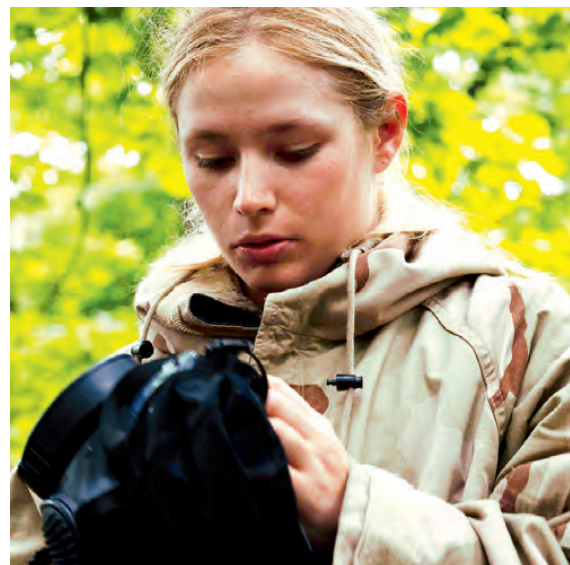
More than 100 students typically complete the program each year, with research topics for the 2025–26 academic year ranging from analyzing endocrine-disrupting chemicals in human milk to expanding surgical care in Laos. Since the program's inception in 2008, many students have published their research as first authors and presented their findings at conferences across the country.

In addition to equipping students with critical thinking skills widely valued across the nursing profession, URMP sets students up for success if they choose to pursue a graduate degree or research career. URMP participants gain a solid foundation in collecting, managing and analyzing data and reporting their results, and some have even gone on to become faculty members and URMP mentors at Pitt Nursing, bringing the program's mission full circle.

"Pitt Nursing is unique in that we have an organized program to match undergraduate students with mentors who are actively conducting impactful research," says Yvette Conley, URMP director and senior associate dean for research and scholarship. "We are taking future nurses and exposing them to research early in their education, and you can't say that for many other BSN programs."

A top training site for nurse scientists, for decades

For two decades running, Pitt Nursing has offered PhD and postdoctoral training through two major National Institutes of Health Institutional Training Grants, known as T32s—one focused on genomic approaches in translational research and one in digital technology and chronic and critical illness. These programs involve faculty mentors from all six health sciences schools, as well as from Carnegie Mellon University, and offer rigorous, interdisciplinary training for doctoral and postdoctoral scholars of nursing science.



Izzy Seidman, BSPH grad, holds a gas mask during ROTC training.

UNDERGRADS EMBRACE PUBLIC HEALTH

Pitt Public Health's BSPH has become increasingly popular.

Growing up in Auburn, Alabama, Izzy Seidman was interested in medicine, but a teacher in high school introduced her to public health as a broader, community-focused option. "That's when I started doing research and learning more—how it's about taking care of everyone, not just treating illness."

Seidman is one of many recent grads from the School of Public Health's new Bachelor of Science in public health (BSPH) program, which has become increasingly popular. In fall 2025, three years after its launch in 2022, the program had grown 162% and expanded to an enrollment of 499.

The program continues to attract an increasing number of students who are passionate about advancing health equity and addressing public health challenges. In fall 2022, Pitt Public Health welcomed 38 first-year students. This number grew to 113 in fall 2023, 117 in 2024, and in 2025, 234 first-year students—the largest cohort yet. Since public health is best learned in the community, students are required to complete 120 service-learning hours. They can now assess the impact of their engagement through a service-learning tracking platform.

Seidman completed her degree while assigned to the ROTC Three Rivers Battalion—a program that includes students from 12 Pittsburgh-area universities.

The Medical Service Corps was always her goal. Now assigned to Korea, she'll be responsible for tracking medical readiness, setting up clinics and managing supplies. "The Army is a people business—and so is public health," she says.

Her time at Pitt prepared her in practical ways. "All the service-learning hours, the community health classes, the hands-on work—it's all helped me build people skills and prepare for this role."

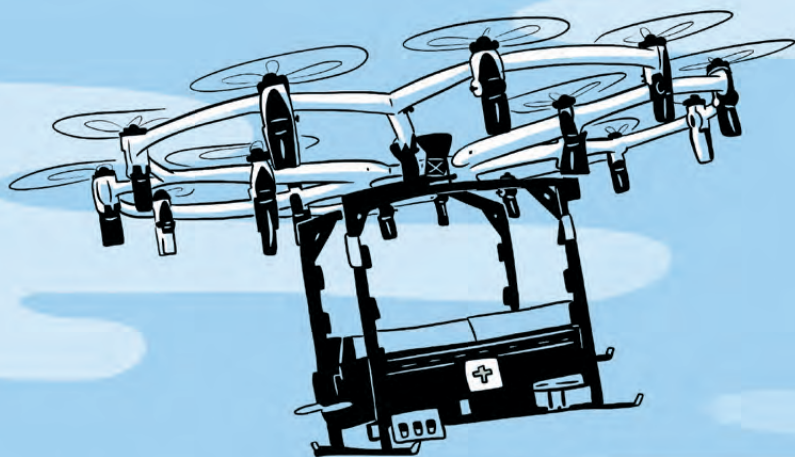
Launchpad of possibilities

Deep into the backwoods for remote rescues or into the cosmos, to learn how we heal and age in extreme environments, Pitt ingenuity goes there.

Look to the stars

Pitt Health Sciences has entered the latest space race in a big way. Researchers here are sending samples into orbit, analyzing multiomics data from astronauts, simulating cosmic experiences on the ground and collaborating across disciplines to find out how human bodies can best handle spaceflight.

Those efforts are poised to go even further with the launch of the Trivedi Institute for Space and Global Biomedicine, announced in January 2026. Leading the institute is someone who not only understands the science of space medicine but has also experienced life beyond our atmosphere firsthand: Kate Rubins, a microbiologist and retired NASA astronaut, serves as director. She joined Pitt in fall 2025 as a professor of computational and systems biology in the School of Medicine.



How the unreachable becomes reachable

Rural remote areas, disaster zones and battlefields share a challenge: delivering urgently needed care in environments where access is limited—or even impossible.

Faculty members in Pitt's Department of Critical Care Medicine have been developing technologies capable of delivering care before a patient reaches a hospital, to improve survival rates for service members and civilians alike. The systems they're developing are autonomous and

semiautonomous, powered by artificial intelligence and robotics.

One Pitt-led project in development is Cardiovascular Resuscitation Using Informed Semi-Closed Loop (CRUISE). CRUISE could be carried in a backpack by a military medic or delivered by drone. It uses non-invasive technology to guide a rescuer in making sure medications, blood and other fluids are delivered properly. The system, which is autonomous in the sense that it's able to diagnose physical needs





Rubins completed two missions aboard the International Space Station (ISS), spending 300 days in space. In the ISS, she performed numerous scientific experiments, including the first DNA sequencing in space, the first long-duration cell culture in space, and organoid and engineered heart tissue research.

Joining her as codirector is Christopher Mason, a space biologist and geneticist who was a principal investigator on the

NASA Twins Study. (Mason will also maintain roles at Weill Cornell Medicine.)

The institute's work, Rubins says, won't just be about the health of her fellow astronauts. Their mission is to translate their space medicine research to serve patients on Earth.

Spaceflight offers accelerated models of a wide range of diseases and conditions, especially aging-related diseases and even aging itself. On top of that, she notes, devices developed to support human health in space must be compact, resilient and portable—all qualities that can improve care for people in remote and hard-to-reach locations on Earth.

"The idea is to use spaceflight science to drive biomedical innovation that helps human health on Earth," Rubins says. "There are so many people on the planet who can benefit from this work."

Space presents unanswered questions extending to nearly every area of human health. The institute's leaders are eager for researchers across the health sciences to join their effort.

"Anything you work on and explore can directly advance our understanding of fundamental health risks associated with spaceflight and drive the development of technologies that make spaceflight safer for all," says Afshin Beheshti, a professor of surgery and of computational and systems biology. He joined Pitt as the director of the Center for Space Biomedicine, which is now part of the Trivedi Institute.

Their mission is both of this, and out of this, world.

Bone health gets a boost

In 2022, Giuseppe Intini, associate professor of dental medicine, sent 40 mice on the SpaceX CRS-26 RR25 mission to study bone loss, a major concern as NASA hopes to have people live and work on the moon and to send people to Mars.

Floating in microgravity means that astronauts' bones don't experience the same impact that they do on Earth, which likely is part of what keeps them from stimulating new growth.

On top of its promise for astronauts, the work offers an opportunity to better understand bone loss from osteoporosis and aging for patients here on Earth.

To examine how bone stem cells seem to become blocked in spaceflight, Intini's team performed RNA sequencing on cells from bones including the skull, femur and teeth after the mice splashed back down. Intini also studied the feasibility of a "bone superglue" called Tetrinite that could offer a less invasive option to repair fractures and encourage bone regeneration.

and make care recommendations, still requires a human in the loop—to apply a sensor or insert an IV. CRUISE would be useful in rural areas, like a car crash in the backwoods, where emergency services might be delayed by distance, weather or both.

Expanding on this vision for enhancing rural care, Pitt joined the Autonomous Aviation Research Consortium for Health Care Innovation and Education Empowerment (AARCHIEE) in 2024. AARCHIEE,

operating out of the John Murtha Johnstown–Cambria County Airport in Johnstown, Pennsylvania, and backed by a \$2 million grant from the U.S. Department of Transportation, will use unmanned drone technology to deliver whole blood to smaller hospitals or directly to an emergency site. Pitt is joined by approximately 40 other government, industry, institutional and community partners for AARCHIEE. They'll start field trials in 2026.

COLLECTIVELY CURIOUS

How did Pitt Health Sciences become a research powerhouse? The brightest minds and hearts love the culture here, where collaboration is not just encouraged, it's expected. We've learned that bringing in diverse perspectives leads to deeper understanding, and that means we are more likely to get solutions to everyone who needs them.

FORWARD MOTION

New insight on resilience to aging

Watching her vibrant mother grow older has made Caterina Rosano's research questions feel particularly personal.

Rosano, a professor of epidemiology in the School of Public Health, studies the neurobiological factors behind aging and why some older adults seem more resilient to its effects.

"When I started this work 25 years ago and my mother was in her 60s, she was super active," says Rosano, an epidemiologist, physician and associate director at Pitt's Aging Institute (see right). "Back then, I wanted to get everybody independent and able to walk. Now, I see there are objective physical limitations that come with age, which has changed my view of resilience and independence."

These days, Rosano focuses her research on finding ways to empower individuals to pursue the goals that matter most to

them. "When my mother is motivated and has an audience, she looks 10 years younger and even moves differently, putting on her cute shoes," Rosano says with a smile.

This insight into motivation and movement is closely aligned with Rosano's work as a population neuroscientist.

Her research suggests that individuals who maintain a quicker gait as they age tend to have higher levels of the neurotransmitter dopamine, which plays a key role in regulating movement, motivation and other functions.

Modern research tools allow investigators to characterize individuals by physical and biochemical traits with unprecedented precision. By studying brain energetics—how the brain obtains, uses and regulates energy—and connecting this to the body, Rosano and her colleagues are gaining a deeper understanding of the brain's impact on muscle health and vice versa.

"The brain and body are in constant communication," says Rosano. "It's not just that the brain makes a muscle move; the brain constantly releases hormones that benefit the muscles, and the muscles release hormones that are equally beneficial for the brain."

Rosano wants to uncover the complexities of brain resilience and develop individual prevention and treatment strategies.

"If I could convince everyone, including my mother, that they have access to this type of resilience—and that they can harness it at any point in their lives—that would be incredibly important," she says.

**"The brain and body
are in constant
communication."**

CATERINA ROSANO

LIVING BETTER FOR LONGER

Aging Institute draws on the power of diverse scientific perspectives to enhance our lifespans.

While a wall calendar and a birth certificate do the trick for determining a person's chronological age, pinning down biological aging remains complex.

The interdisciplinary researchers at Pitt's Aging Institute are reaching new insights that paint a clearer picture of what it means for the human body to get older—and how to make that process a healthier one.

"Aging is one of the least understood biological processes," says Toren Finkel, director of the Aging Institute. "It's something—if we're lucky—we all do, yet we don't understand why or how."

Anne Newman, Distinguished Professor Emerita in the School of Public Health and School of Medicine, who was until recently clinical director of the Aging Institute, is among those shedding new light on aging.

She and her collaborators are conducting the largest-ever study (the Study of Muscle, Mobility and Aging, or SOMMA) focused on understanding how muscles weaken and mobility declines during aging. The team is measuring the participants' physical

functioning along with biological factors that could be at play in the muscle tissue, such as mitochondrial function, genetic expression and muscle innervation.

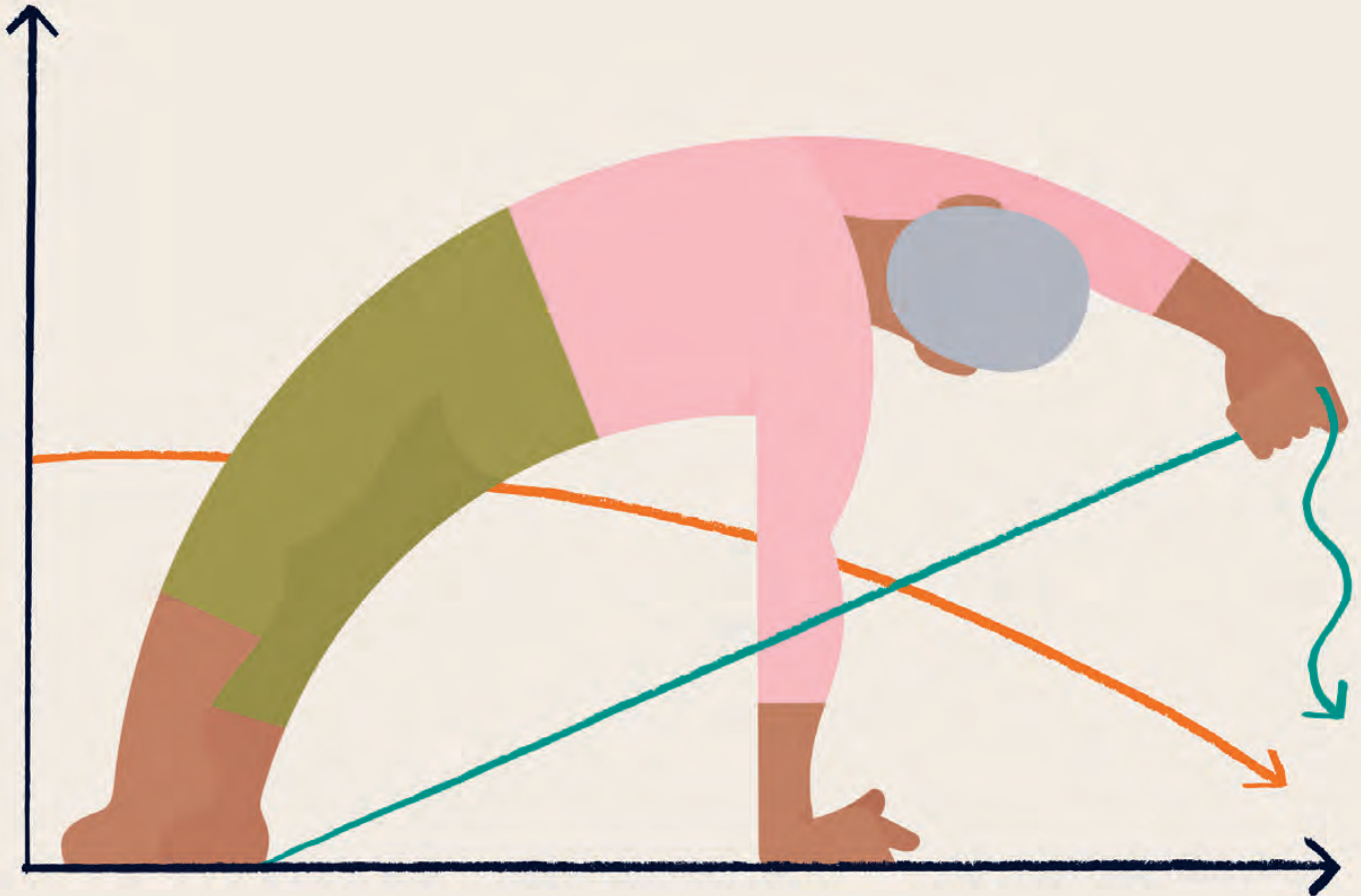
In the first five years of the study, they collected data indicating that mitochondrial function was strongly related to walking ability and peak oxygen consumption on a treadmill test. Newman recently turned over the principal investigator role to her colleague Nancy Glynn, an associate professor of epidemiology in the School of Public Health, but remains a co-investigator on the study.

Newman says that her work with clinical research volunteers, many of whom have remained healthy into old age, reminds her what the focus of aging research should be.

"That's been very inspiring to me, to see that many of these folks who are volunteering for our study are thriving," she says. "They tell us what's possible."

"Aging is one of the least understood biological processes."

TOREN FINKEL



Why Pitt?

That sense of “Yes, you can.”

“I truly consider myself addicted to the pleasure of learning,” Mahboube Hasheminasab says. Hasheminasab, who was a practicing oral and maxillofacial surgeon in Iran, left in 2022 for the United States in her quest for a challenge. After a year in San Francisco, she chose Pitt for periodontology training. She visited a number of medical centers:

“When I came to Pitt, I saw something different immediately. I saw hardworking, open-minded and highly driven people—individuals who don’t take ‘no’ for an answer and who pursue visions far bigger than the microscopic scale of surgery we perform in periodontics.”

Her clinical work spans from delicate, microscopic-level procedures to large-scale surgeries that include full-mouth rehabilitations.

Research Hasheminasab conducts in the lab of Giuseppe Intini (see page 11) won her the award for “Best Basic Science Research” at the annual American Academy of Periodontology meeting in 2025. The science focuses on periodontal ligament (PDL) stem cells.

“If we can harness and isolate PDL stem cells for clinical regeneration, we could use native cells to regenerate [various] tissue types simultaneously.

“At Pitt, I have access to exceptional research facilities as well as advanced clinical tools. This combination of resources allows me to grow as both a clinician and a scientist.”



Thomas Karikari

A RISING RESEARCH STAR DESIGNS ACCESSIBLE DIAGNOSTICS

Karikari’s blood tests for Alzheimer’s could be game-changing.

In November 2025, the journal *Nature* named the University of Pittsburgh’s Thomas Karkari one of three “rising stars” in the field of aging.

Karikari, an assistant professor of psychiatry in the School of Medicine, has developed blood tests that reveal signs of Alzheimer’s disease years before tests that are now clinically available can. MRI-based imaging and cerebrospinal fluid tests can diagnose the disease but often only after the brain is damaged and

Aging ready

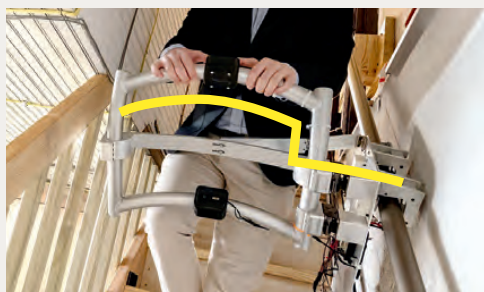
Most older adults want to age in place, yet that can be tough to do, especially in Pittsburgh. The city’s hilly terrain and older homes present challenges. But those factors also make the city an ideal testing ground for thoughtful solutions like those built and evaluated at the University of Pittsburgh’s Healthy Home Lab (HHL). Housed in a 100-year-old former family home in the Oakland neighborhood, the HHL is a unique multidisciplinary center, uniting faculty members from health sciences and engineering to develop and test high- and low-tech interventions for older adults—and anyone with mobility issues. From ergonomic stair assists to an adaptable rail system, HHL’s goal is to move beyond simple home modifications by leveraging smart technology for better safety and well-being. The researchers often target the most common cause of injury: falls. In partnership with community organizations, they are working to vet and translate these products into tested solutions that are aging appropriate.

clinical symptoms emerge—those methods also require significant hospital infrastructure. Karikari was determined to develop tests that would help people without such resources, like friends and family in the small village where he grew up in Ghana.

The Alzheimer's Association uses a framework of three points for disease diagnosis—tau tangles, amyloid-beta plaque deposits and neurodegeneration. Because the presence of amyloid-beta deposits does not always lead to Alzheimer's disease, Karikari and his team looked at tau, a brain protein that causes healthy brain cells to die when it deteriorates into clumps. They found that specific forms of tau can be detected in blood plasma using a biomarker test as long as a decade before it would appear on an MRI, which could lead to earlier diagnosis and treatment. Since then, Karikari's team has developed several blood biomarker methods and tools targeting not only tau but other pathologies in Alzheimer's and related diseases. Pitt has patented several of these inventions, with many others in development. In May 2025, the Food and Drug Administration approved the first blood test for Alzheimer's disease, which measures the ratio of specific modified forms of tau protein (p-tau217) and the amyloid beta peptide (Aβ1-42), to a commercial entity. These are two key pathological entities for which the Karikari group has built blood tests.

Karikari has not been content to stop with the creation of quicker diagnostic tests alone. He has considered the ethics of providing blood test results without proper clinical support and how accurate and accessible the tests are:

"All of these [tests] we're creating are great, but these tools should reach all people who would benefit. Until they reach the people in the village where I grew up, the tool has failed."



BACK IN SIGHT

A bookworm with macular degeneration reads again.

Years ago, Sheila Irvine lost her central vision to age-related macular degeneration (AMD), a devastating disease that destroys light-sensing cells in the retina. AMD is the leading cause of irreversible blindness in older adults; more than 5 million people worldwide have an advanced form of the disease.

"I was an avid bookworm, and I wanted that back," says the 70-year-old resident of Wiltshire, England.

Today, she's reading and doing crossword puzzles again, as a participant in a multinational clinical trial of an experimental prosthetic-vision system called PRIMA. José-Alain Sahel, a Distinguished Professor, Eye and Ear Foundation Professor and Chair of ophthalmology at Pitt, as well as director of the UPMC Vision Institute, was senior author of a paper published in the *New England Journal of Medicine* (NEJM) about the trial.

"[This trial is] the first time that any attempt at vision restoration has achieved such results in a large number of patients," Sahel says. "More than 80% of the patients were able to read letters and words, and some of them are reading pages in a book. This is really something we couldn't have dreamt of when we started on this journey."

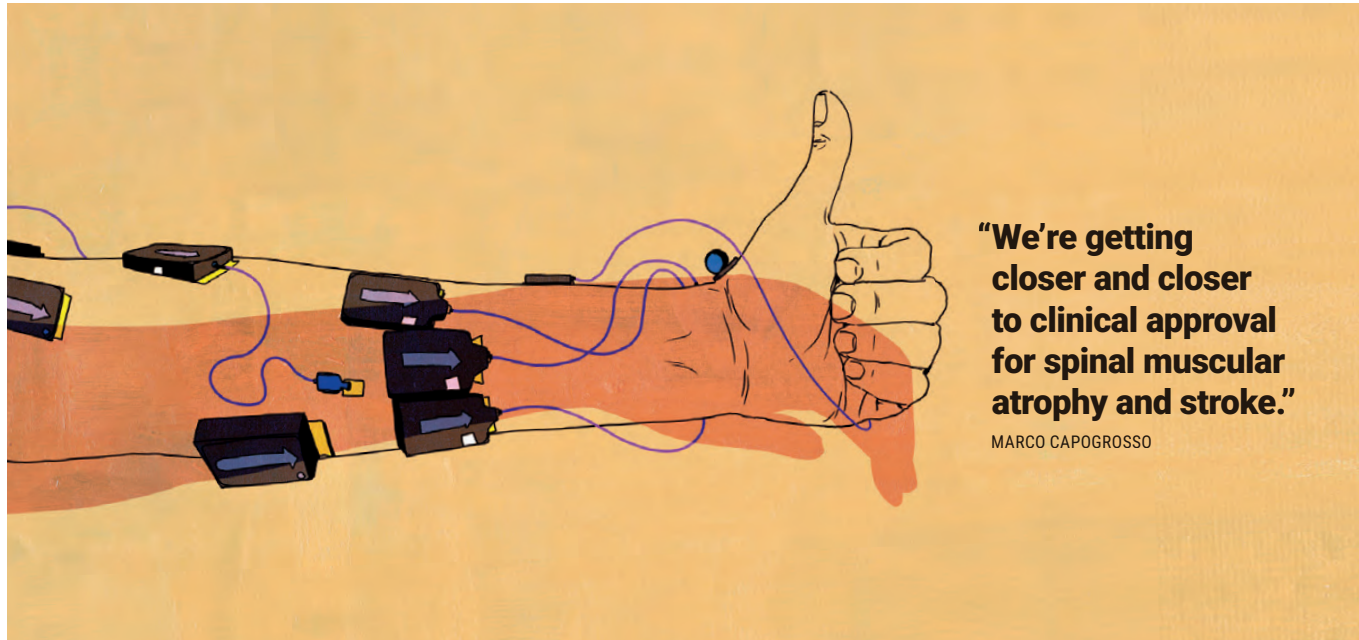
In 2020, UPMC became the first U.S. site to implant PRIMA, which was invented by Sahel's longtime collaborator, Daniel Palanker at Stanford University. The Pittsburgh-based feasibility study, which was led by Joseph Martel, an associate professor of ophthalmology at Pitt, ran in parallel with the first trial in France. PRIMA is one of a number of vision restoration approaches being explored by the institute.

The PRIMA system compensates for lost retinal cells with a 2-by-2 mm wireless implant that converts light into electrical signals to stimulate remaining retinal cells. A camera mounted on specialized glasses captures images and projects them onto the implant using near-infrared light. The implant then converts the light into electrical pulses, restoring the flow of visual information to the brain.

ON AVERAGE, PARTICIPANTS IMPROVED BY ABOUT FIVE LINES ON A STANDARD EYE CHART. ONE PARTICIPANT IMPROVED BY 12 LINES.

Of the 32 participants who completed the trial, 26 achieved clinically meaningful improvements in visual acuity. On average, participants improved by about five lines on a standard eye chart. One participant improved by 12 lines.

Although the implant alone can't fully restore vision to 20/20, Sahel and his colleagues are now investigating additional approaches that could further improve quality of life and take patients above the threshold for legal blindness.



SURPASSING EXPECTATIONS

Restored movement for people with stroke and spinal muscular atrophy

A stroke more than a decade ago paralyzed Heather Rendulic on her left side. Rather than woe-is-me thinking, she embraced a glass-half-full mentality and rehabbed her way back into walking and living a full life. She took that positivity and hopefulness into a clinical trial in 2021 at Pitt's multidisciplinary Rehab Neural Engineering Labs that offered her the chance to regain function in her left arm. Doubt lingered before getting started, she admitted, and it wasn't long before she broke down in tears.

As it turned out, the experimental surgery that used a spinal implant to deliver pulses of electricity to activate nerve cells inside the spinal cord didn't meet her expectations.

It far exceeded them.

The sensory nerves from the arm and hand send signals to motor neurons in the spinal cord that control the muscles of the limb. Stimulating these sensory nerves amplifies the activity of muscles that have been weakened by stroke.

Millions have watched a YouTube video of Rendulic using her arm to lift and move a can of tomato soup, among other tasks.

That spinal stimulation therapy which caused Rendulic to shed tears of joy recently won Federal Drug Administration (FDA) approval to move into a second trial phase where it will be tested longer term—as a potential permanent implant. Rendulic used the technology temporarily.

Marco Capogrosso, assistant professor of neurological surgery in the School of Medicine, leads the group conducting the research.

The lab has also been using spinal stimulation to treat spinal muscular atrophy. SMA is an inherited neurodegenerative disease

that manifests in progressive death and functional decline of motor neurons, nerve cells that control movement by transmitting signals from the brain and the spinal cord to the muscles. Through time, the loss of motor neurons causes gradual muscle weakness and leads to a variety of motor deficits. Yet spinal stimulation trial participants experienced improved strength, gait and endurance. Capogrosso's team is hoping to get FDA approval to move that study into a second phase.

"We're getting closer and closer to clinical approval for SMA and stroke," says Capogrosso.

THE TINY BIOMES WE CARRY

Microbiomes affect eye and reproductive health.

Pitt doctors made headlines in 2021 when they showed that changing the gut microbiome—an extensive collection of bacteria, viruses, fungi and other microbes—could improve certain patients' responses to immunotherapy for melanoma. Scientists here continue to demonstrate the importance of our body's flora and fauna to our health, for instance:

In a happy lab accident—where his team forgot about a specimen plate—the lab Anthony St. Leger worked in discovered slow-growing bacteria on an eye surface. They believe the bacterium (called *C. mastitidis*) helps keep the eye healthy by stimulating immune responses that prevent ocular surface disease.

Microbes of the gut and lung both are thought to influence eye health, but scientists long thought the eye surface was sterile. With new insight, St. Leger, associate professor of ophthalmology and immunology, and scientists elsewhere are now starting

to experiment with ways of changing the make up of the eye microbiome. St. Leger's team has already genetically engineered a microbe that helps mouse cornea heal. "You know how you take probiotics for your gut?" he said to a reporter for the journal *Nature* in a November 2025 feature story. "We're trying to create probiotics for the eye, essentially."

Another Pitt team has uncovered how the gut microbiome regulates the female reproductive lifespan.

The lab of Eldin Jašarević, assistant professor of obstetrics, gynecology and reproductive sciences and of computational and systems biology in the School of Medicine, learned that gut bacteria influence the rate at which females deplete their limited egg reserves. The team also found that dietary fiber can help preserve fertility and improve egg quality and pregnancy outcomes (even when study subjects eat Western-style high-fat diets known to impair conception).

"When we discovered that the microbiome controls egg loss, we asked: What influences the microbiome? Diet was the clear answer," Jašarević says. "We focused on dietary fiber because it specifically nourishes the beneficial bacteria that emerge during the critical period when babies transition from breast milk to solid foods. These bacteria produce metabolites that we found directly impact ovarian health."

These findings open the door to possible preventive treatments for infertility, like probiotics and dietary changes that support healthy microbiota. Critically, the study also found that childhood nutrition, not just adult diet, can influence reproductive health decades later.

These implications extend beyond fertility.

"We're beginning to understand that diet and nutrition aren't just short-term choices, and that they're deeply woven into the fabric of our lifespan," Jašarević says. "What we consume shapes our biology, our microbiome and even the aging of organs we've long ignored—like the ovaries."

Probing questions of heart disease and oral health

Researchers in Pitt's Schools of Dental Medicine and Medicine plan to study the influence that oral health and the oral microbiome have in atherosclerotic cardiovascular disease (ASCVD) risk. Led by Samantha Manna and Mariana Bezamat, both assistant professors of dental medicine, and Barbara Methé, a professor of medicine, the team believes that a variety of factors, including socioeconomic status, connect oral health with ASCVD.

PHARMACISTS AND CRITICAL CARE DOCS TEAM UP

They plan to avoid and reduce harm from drug-associated acute kidney injury.

A variety of factors can play into acute kidney injury, but one that can be controlled is medication. University of Pittsburgh researchers are testing a system that arms pharmacists with the information they need to alert physicians to any drug-associated risks for hospital patients. Should it work, the process could improve or even save the lives of these patients.

In June 2025, Sandra Kane-Gill wrapped up a clinical study that tested whether pharmacist-led, machine learning-driven predictive-analysis-based surveillance can help prevent drug-associated acute kidney injury in hospitalized adult patients who weren't in the ICU. Structured as a cluster randomized controlled trial at eight UPMC hospitals, the study included about 3,300 patients and 690 physicians.

In cases of acute kidney injury, the patient often experiences a sudden reduction in the filtration ability of the organ—that affects about 18 people out of every 1,000 annually in the United States. Medications are a major contributor to the condition; about 30% of cases are drug associated. Although acute cases can be reversible, recovery is often dependent on the duration of exposure.

"Drugs as a cause are a modifiable risk," says Kane-Gill, a professor of pharmacy and therapeutics at Pitt School of Pharmacy.

The project, which began with the development of an AI model, has been supported by a five-year, \$3.2 million grant from the National Institutes of Health. Raghavan Murugan, professor of critical care medicine at Pitt, worked with Kane-Gill on the study execution. Donald Yealy, a Distinguished Professor and UPMC Endowed Professor and Chair of Emergency Medicine at Pitt, supported implementation at UPMC.

The AI model, developed in conjunction with Azra Bihorac and team at the University of Florida, constantly captures and evaluates more than 200 variables from patients, ranging from lab values to vital signs. The information is then sent to a pharmacist for assessment, who then can discuss interventions with the patient's physician. Data collection for the study ran over 16 months.

"This is one of the larger evaluations in bringing machine learning to the bedside," Kane-Gill says. The team is evaluating the results; and after a cost analysis, they'll understand the practicality of keeping the system running in the real world.

"Drugs as a cause are a modifiable risk."

SANDRA KANE-GILL

Why Pitt?

Team science before it was vogue.

Gwen Sowa, the Physical Medicine and Rehabilitation Chair in the School of Medicine, is leading an effort to abate chronic lower back pain, a \$500 billion-a-year problem. Clinicians, scientists and engineers are building gigantic datasets and employing machine learning to better understand the right approach for each patient. The effort involves a “dream team” of investigators from schools throughout Pitt who can tackle the condition from multiple perspectives.

Pitt is a place where experts want to work together, says Sowa. “There is an expectation of academic excellence without the cutthroat atmosphere that you sometimes see.

“Pittsburgh in and of itself is a very collaborative atmosphere. And that translates into the University system, where that same culture persists. Now [team-based science] is the name of the game, and we have a big advantage because we’ve been doing that for decades.

“People want to share their data. They want to share their ideas. They’re not afraid of being scooped. Instead, they share their idea because they know that’s going to stimulate a collaboration.

“I came here for the academic excellence, but I’ve stayed for the collaboration.”



POTENT PRECISION MEDICINE

Partnership will use AI and multiomics to improve lives, reduce costs.

Pitt’s partnership with Vizzy Inc., a global artificial intelligence company, will tackle disease prevention and early detection through a patient-centric initiative that aims to not only improve lives but reduce the massive costs associated with treating chronic conditions.

Each year, the United States spends more than \$3 trillion on managing conditions like obesity, diabetes and Alzheimer’s—a price tag that continues to climb. Early detection and prevention would not only help mitigate these costs but also lead to longer, healthier lives for patients.

The new partnership will create a new AI platform called GAINMED, which will use its own generative (like ChatGPT) and agentic (adaptable and proactive) intelligence to navigate “multiomics” data (genomics, proteomics, metabolomics, etc.). The platform will advance what’s known as P5 medicine—care that’s predictive, preventive, personalized, precise and participatory.

The initiative also establishes the Pitt-Vizzy Longevity Labs, in partnership with the sequencing company Illumina, providing laboratory services to expand precision medicine across the United States and globally. By combining data analyzed at Pitt-Vizzy Longevity Labs with AI, GAINMED will deliver comprehensive care plans, empowering clinicians and patients to make more informed and personalized treatment decisions.

The project’s first phase involves recruiting 20,000 participants and 200-plus primary care providers worldwide to garner and sequence samples. Pitt-Vizzy Longevity Labs will expand across Europe and Asia to support data collection and analysis. One long-term goal is to deliver top-tier health care to underserved populations.

“WE’RE USING CUTTING-EDGE TECHNOLOGY TO CREATE NOT ONLY BETTER UNDERSTANDING OF DISEASES AND HEALTH, BUT WE’RE ALSO GOING TO BE ABLE TO PROVIDE BETTER CARE TO MAINTAIN HEALTH.”

ANANTHA SHEKHAR

“We’re using cutting-edge technology to create not only better understanding of diseases and health, but we’re also going to be able to provide better care to maintain health,” says Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean, School of Medicine.

Pitt Chancellor Joan Gabel says the effort marks an important moment for Pittsburgh—and for patients. “There are challenges that we’re all facing, but none more so than those who should be given access to the most innovative ways to receive treatment and care.”

PERSONAL AND PROMISING

Throughout the health sciences at Pitt, scholars are tailoring health care. A few examples:

Early in his career, Zachary Freyberg had a patient who gained substantial weight in a short amount of time after going on an antipsychotic medication. This left an impression on Freyberg, so the associate professor of psychiatry became determined to learn more about why these drugs cause metabolic dysfunction, including an increased risk of type 2 diabetes. His team is studying how the medications, which target dopamine receptors in the brain, end up disrupting the function of the pancreas, which has similar receptors. He's found that sex differences in animal models could point to ways to address the metabolic effects through precision medicine.

Pitt researchers in the multidisciplinary Rehab Neural Engineering Labs (RNEL) have developed a new treatment for epilepsy patients who don't respond to medication and aren't candidates for surgery: deep brain stimulation (DBS) tailored to each patient's unique brain wiring. The team found connections between seizure-prone regions and the thalamus, the part of the brain stimulated in DBS. When the team electrically stimulated the area of the thalamus best matched with seizure activity in the cerebral cortex, patients experienced a dramatic decrease in the number and severity of seizures. Their findings were published in *Nature Communications*, with Arianna Damiani, an RNEL graduate bioengineering student researcher, as first author, and the School of Medicine's Elvira Pirondini, of physical medicine and rehabilitation, and Jorge A. González-Martínez, of neurobiology, as senior authors.

In a recent study in *GeroScience*, **Yvette Conley found that epigenetics played a part in determining whether women with early stage breast cancer experienced improved working memory and attention after a six-month aerobic exercise program.** Using genomics, Conley, a Distinguished Service Professor of Nursing, studies how patients develop symptoms and how well patients do after traumatic brain injury, stroke, cancer and therapeutic interventions for cancer. Conley is also a professor of human genetics in the School of Public Health.

Da Yang and colleagues recently learned what epigenetic micro-environment needs to be in place around tumors so that certain immunotherapies and chemotherapies can destroy them. Yang is a professor of pharmaceutical sciences whose papers have been cited more than 20,000 times. He's one of a team of experts at Pitt Pharmacy known for their work in pharmacogenetics.

Researchers who study chronic jaw pain know that some patients may respond better to physical therapy, some to medication and some not at all, but they have long struggled to understand why. So dental medicine and medical researchers at Pitt are leading a \$17 million study—the largest collaborative funded by the National Institute of Dental and Craniofacial Research to study temporomandibular disorders (TMD). The project, called CREATE, aims to collect data on 1,000 TMD patients and eventually to manage their pain more effectively.

Alejandro Almarza, professor of oral and craniofacial sciences,

School of Dental Medicine, and the project's director, notes that TMD is an umbrella term for a heterogeneous set of 30-plus conditions. Michael Gold, professor of neurobiology, School of Medicine, and the project's co-core principal investigator, says that the study will view pain not only as a physical problem but also through a biopsychosocial model.

The investigators note they are taking an integrated, whole-person view of the problem, which adds complexity, both in understanding how the pain manifests and how to manage it.

Lu Tang, in a collaboration with faculty in critical care medicine, used electronic health records from sepsis patients across UPMC hospitals to determine the best time to administer treatments, and for which patients, to improve survival rates.

The associate professor of biostatistics and health data science in the School of Public Health is a practitioner of precision public health: "If we apply a one-size-fits-all approach, patients will not get what's best for them—they're going to get what's the best for the entire population. Every patient is unique, and patients may need specific, individualized plans to help them recover."

Tang keeps the principles of safety, interpretability and fairness at the forefront of his work. "In the health care and health policy settings, we're dealing with more complicated data, and high-stakes problems that could lead to both death and economical losses. That really drives me to think from [all these] perspectives when developing new methodologies."

Quasar Padiath is chair of human genetics at Pitt Public Health. He led a team that recently showed that a gene "silencer" residing in junk DNA spares people from a fatal progressive neurological disease called autosomal dominant leukodystrophy; the team published the breakthrough in *Nature Communications*. The discovery explains why not all people with the genetic mutation develop the disease and has significant implications for diagnosis and genetic counseling.

A one-size-fits-all approach is also not optimal for hearing-loss gene therapies. There are more than 100 distinct forms of genetic hearing loss, each caused by mutations in different genes; yet because of difficulties translating such treatments to human health, no FDA-approved gene therapies exist. In 2025, Pitt researchers were able to correct genetic (specifically TOMT-linked) hearing loss in mice with unprecedented precision in a way that maximizes benefit and minimizes toxicity. Pitt's Christopher Cunningham and Thanos Tzounopoulos, otolaryngology faculty in the Pittsburgh Hearing Research Center, with the University's spin-off company Echogenesis Therapeutics, have been in discussions with the FDA to develop studies to advance the gene-therapy technology for humans.

INSPIRED AND INVENTIVE

Pitt is a creative and economic engine for our region and beyond. We have the depth and breadth to look at health problems from every angle, so we do. Why? Because when we bring a solution to market, it means thousands, perhaps millions, enjoy a healthier existence, and many get a new lease on life.

Why Pitt?

We will lead revolutionary change in care.

"Over the next five years, we will transform the way medical research is done. We will transform the way drug discovery is done. And we definitely want to transform the way new products are done."

—Anantha Shekhar



TO THE GREATER GOOD

Pitt helps researchers commercialize findings, which is essential to get breakthroughs to patients. Then revenue is reinvested in discovery.

Publishing research, getting grants—“we’re good there,” says Smita Iyer, an associate professor of pathology in Pitt’s School of Medicine.

Where the trouble often comes in for scientists is getting innovations to market to benefit patients.

“You’re not really trained in generating pitch decks or business plans, so there’s certainly a real gap when you’re trying to move discoveries to the clinic,” Iyer says. “Even though you have a breakthrough in the lab, without guidance or resources, it can stall.”

She’s designing a drug to rewire a subset of brain cells to promote their regeneration for the benefit of HIV patients; that effort is part of the first cohort to receive funding through Pitt Idea Navigation to Commercialization (Pitt.INC), a program that helps innovators in the health sciences take the crucial first steps in getting to market. It offers up to \$50,000 in funding, as well as support through the University’s commercialization ecosystem.

Pitt.INC awarded funding to five other projects in the health sciences that range from treating chronic traumatic encephalopathy to Meniere’s, an inner ear disease, to chronic kidney disease.

The University started to emphasize commercializing research about a decade ago. Its Office of Innovation and Entrepreneurship (OIE), which runs Pitt.INC and several other technology transfer, education, mentorship and support programs for innovators, plays a key role.

“The mission, from a macro perspective, is providing societal benefit,” says Evan Facher, Pitt’s vice chancellor for innovation and entrepreneurship, who leads the OIE. His office carries out the section of the University’s mission statement that reads,

Commercialization generates revenue that perpetuates more research, so it’s not only crucial for patients, but, now more than ever, to Pitt as well.

“cooperate with industrial and governmental institutions to transfer knowledge in science, technology and health care.”

Commercialization also generates revenue that perpetuates more research, so it’s not only crucial for patients, but, now more than ever, to Pitt as well—and you can extrapolate that out to Pittsburgh and the region.

Pitt’s push to bring new solutions to patients goes beyond funding competitions and includes its Clinical Trials Office (CTO)—closely aligned with the OIE—that’s focused on streamlining and accelerating the clinical research process. The office was established in 2025. Patricia Corby, associate vice chancellor for clinical trials development and operations, expects the CTO will shave time off the process of advancing clinical research and ensuring that it’s ethical and complies with regulatory standards, which right now takes about 7.5 years.

Pitt innovators are also finding solutions that remove limitations on mobility, like breakthrough implants that help people move again and tech for monitoring ADA compliance.

As Pitt experts help people realize their potential on a number of fronts, others are recognizing that momentum is building. The Orland Bethel Family Foundation recently gave tens of millions in support of Pitt efforts to commercialize solutions for musculoskeletal disease.

University leaders believe that Pitt is poised to lead revolutionary changes in health. “Over the next five years, we will transform the way medical research is done. We will transform the way drug discovery is done. And we definitely want to transform the way new products are done,” Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean, School of Medicine, has said. “We have an environment ripe for innovation. We are building the infrastructure and ecosystem that can take our research to the next level of product development, commercialization and manufacturing.”





Jill Demirci

MILK MATH

Nursing prof develops a digital platform designed to safely connect mothers with surplus breast milk to families in need.

When Jill Demirci started working as a postpartum nurse in 2005, she witnessed firsthand the challenges new mothers face. “I was excited to help new moms and parents, but many struggled mightily with breastfeeding, and we did not receive much training on lactation,” she says.

As she did her best to support her patients, she became fascinated by human milk as an “evolutionarily perfect” system for the health of mothers and babies alike, so much so that she returned to Pitt, her alma mater, to complete her master’s and doctoral degrees with a research focus on clinical and behavioral interventions for improved breastfeeding.

Now an associate professor in Pitt’s School of Nursing and director of the Maternal/Perinatal and Reproductive Health Research Hub, Demirci leads efforts to revolutionize postpartum care. Her research examines the complex factors contributing to low milk supply and seeks to develop scalable, evidence-based solutions.

Through the Pitt Empowering Innovation, Incubation and Impact (EI³) fellowship, administered by the Office of Innovation and Entrepreneurship (OIE), Demirci developed Milk Match, a digital platform designed to safely connect mothers with surplus breast milk to families in need, beyond what traditional milk banks offer. The project has also received support from the University’s Clinical and Translational Science Institute and the Office of Research.

Demirci is laying the groundwork for a wrap-around lactation care center at the School of Nursing—a hub that integrates specialty clinical services like infant speech-language therapy, maternal mental health, and doula and peer support, as well as research. Her goal: to create a replicable model of nurse-led innovation to improve outcomes for families here and elsewhere.

Demirci plans to scale her work beyond Pittsburgh, which is rewarding, she says: “At the end of my life...what will be the worthwhile thing that I would want to leave behind? For me, that will be to have optimized the way care for new parents and families is delivered at a wide scale.”

PARTNERSHIPS ALIGNED

Foundation and industry alliances that accelerate discovery and reimagine delivery of lifesaving solutions

Foundation and industry partners are key to Pitt’s efforts to lead in health product development, commercialization and manufacturing. A prime example: Pitt BioForge, the massive life sciences project at Hazelwood Green funded by a \$100 million grant from the Richard King Mellon Foundation. The Henry L. Hillman Foundation will also support bioanalytics at BioForge through a recent \$6 million commitment.

ElevateBio, the anchor tenant, is scheduled to open its second cell and gene therapy manufacturing operation in the first half of 2027, accelerating the rate at which new biologic precision medicines are produced. Live-cell and genetic therapies, for instance, hold great promise for addressing diseases and conditions that pills can’t.

Here’s another great example of how partnerships can turbo-charge discovery: The technology company Leidos and Pitt have established a \$10 million agreement that will advance work at Pitt’s Computational Pathology and AI Center of Excellence.

A focus of the five-year collaboration will be developing AI-powered tools for quicker detection of heart disease, cancer and other conditions, enabling earlier, more effective care management. These advancements should benefit groups facing barriers to high-level care, including veterans and patients in rural communities.

Why Pitt?

A great investment.

Blackrock Neurotech, which recently gave a \$740,000 grant to further the vision research of Xing Chen, assistant professor of ophthalmology, says the expertise and translational capabilities are key reasons they’ve invested in Pitt.

“At a higher level, we are aligned with academic partners like Pitt in a shared mission: to restore lost functions and improve lives,” says Florian Solzbacher, company cofounder and chair. “That only happens when basic science is paired with the rare ability to carry it through to translation and clinical readiness.

“Pitt has built that bridge.”



On the horizon: affordability and access to the latest medicines

“We are literally at the dawn of precision biological medicine, which is going to change the way we not only treat certain diseases and what kind of therapeutics we come up with, but it is going to demand a completely different approach to the manufacturing and the associated tools,” notes Ken Gabriel, CEO of **Pitt BioForge**. Still, he adds, “the reality is that many such treatments [like gene therapy] are out of reach because of their costs, with some running as much as \$4.5 million.” Though the construction of the BioForge facility in Hazelwood

Green won’t be complete until 2028, its experts are already tackling these issues of accessibility and affordability in a temporary space nearby.

One project is an mRNA brokerage service, which democratizes access to the technology.

Another involves dissolvable microneedle arrays that deliver a precision skin therapeutic. After 14 months, the project, in collaboration with Panther Life Sciences, completed its work at BioForge and decided to establish its manufacturing and materials section in Pittsburgh.



“Pitt has built that bridge.”

FLORIAN SOLZBACHER

BioForge at Hazelwood Green



Benjamin Leslie and a prototype

Student-led startup has big plans

It isn’t just Pitt’s seasoned researchers who are spinning out startups. Case in point is **Malleous**, a collaboration among University faculty, med students and undergrads, which developed a surgical instrument combining suction and retraction tools into one device.

The device, which maintains malleable and bendable properties, has the potential to reduce the duration of procedures and patient risk and save hospitals money.

Malleous nabbed the top prize at the 2024 Big Idea Competition, sponsored by Pitt’s Office of Innovation and Entrepreneurship’s Big Idea Center—a hub for student innovation and entrepreneurship. The center runs the annual competition, which awards funding to projects with market potential. First place teams get \$25,000.

Benjamin Leslie, Malleous CEO and second-year Pitt School of Medicine student, began developing the device while a bioengineering major and hockey captain at Pitt. He says the University has supplied \$100,000 of the funding it has raised to date through several awards, getting the device to this point in its development.

“We’re looking to create a production equivalent prototype and have been working with a manufacturer,” he says. “It will be our first real look at what the device will look like in practice. As of right now what we have are some high-fidelity prototypes that we’ve done cadaver testing on.” After the prototype is squared away, the team plans to get the device into clinical testing quickly.

CARING AND CONNECTED

In health, it's all connected. We know that sharing expertise leads to meaningful progress. And when six schools work as one, hard-to-treat problems become a whole lot more treatable. Every day we're at work helping people live their fullest lives.

HUB FOR HEALTH

Students learn from peers at this community resource.

Established in response to the COVID-19 pandemic, Pitt's Vaccination and Health Connection Hub now offers vaccines and travel health consultations to the public and biometric evaluations to Pitt employees.

Led by faculty from the School of Pharmacy, the Hub also provides opportunities for students across Pitt's six schools of the health sciences to have patient-centered interactions in a dynamic, interprofessional setting. It serves as a student learning laboratory for all aspects of running a clinic.

Josh Goltsman, a third-year pharmacy student who interned at the Hub, notes that it provides multiple opportunities for connecting with people in other fields and learning to respect what each of them brings:

"The team really emphasizes the importance of learning from your peers in other health disciplines, and it's amazing to see that synergy in how we take care of our patients."

ABOUT FACES

Team restores function, confidence and hope.

In many ways, the University of Pittsburgh has transformed the face of health care. Now, thanks to Banu Karayazgan and colleagues, Pitt's School of Dental Medicine is a leader in the restoration of actual faces.

Karayazgan, professor of prosthodontics, directs Pitt Dental Medicine's Oral and Maxillofacial Prosthodontics Services located in UPMC Montefiore. Her work focuses on patients who have lost portions of their face or jaw due to cancer, trauma or congenital conditions—people facing challenges most of us never consider until they're suddenly, devastatingly real.

"When part of the upper jaw is removed, a patient cannot eat because food escapes into the nasal cavity and the patient often cannot speak clearly," Karayazgan says.

Through highly specialized prosthetics called obturators, she helps restore these fundamental abilities.

Patients may be able to enjoy a meal or hold a conversation again, often within hours of receiving care.

"Regaining the ability to speak clearly, smile without self-consciousness or simply drink water without fear—that changes everything," she says.

Restoration goes far beyond physical function. Karayazgan knows that she is returning confidence and a sense of self to each patient she treats. "When someone looks in the mirror for the first time with their facial prosthesis and sees themselves again rather than only a defect, it is an incredibly emotional moment."

**"REGAINING THE
ABILITY TO SPEAK
CLEARLY, SMILE WITHOUT
SELF-CONSCIOUSNESS
OR SIMPLY DRINK WATER
WITHOUT FEAR—THAT
CHANGES EVERYTHING."**

BANU KARAYAZGAN



Creating moments like that requires a unique combination of skills. Each facial prosthetic piece is handcrafted, colored, painted, formed and fit to a specific person. “When we do it right, it’s invisible,” says Mark Goetz, maxillofacial prosthetics technician at the School of Dental Medicine.

Goetz brings an artistic touch to the work. He grew up sculpting, painting and otherwise assisting his uncle, an artist widely known for his wax works and sculptures. Thanks to a partnership with Karayazgan, Goetz now uses those skills he honed as a youth to change people’s lives.

Many patients require surgery that causes alterations in their appearance in some way. Some patients lose an ear, eye or nose. Goetz creates prostheses that, when worn, look almost like the procedures never happened

“We fitted one patient with a complicated orbital piece that involved many materials. She looked at herself in the mirror for the first time, paused, and said, ‘I’m human again.’ I’ll never forget that,” says Goetz.

TAKING ON SUBSTANCE USE DISORDER FROM EVERY ANGLE

Pharmacy-led program’s reach is broad and deep.

Substance abuse has been plaguing Americans for more than 40 years. What started as a rise in cocaine and heroin use in the 1990s gave way to the overprescribing of opioid prescription drugs for pain relief and management in the early 2000s. During the past several years, despite a reduction in opioid prescribing, other factors such as the introduction of more potent, illegally produced synthetic substances like fentanyl have created new challenges and perpetuated the ongoing crisis.

From 1999 to 2023, approximately 806,000 people died from an opioid overdose. This includes overdose deaths involving prescription and illegal opioids. For every overdose that results in death, there are many more nonfatal overdoses, each one with its own emotional and economic toll. Not surprisingly, mental health conditions frequently coincide with addiction.

Pitt’s School of Pharmacy is committed to changing that narrative with its Implementation and Research Center for Healthy Communities (IRC), led by Lucas G. Hill, associate professor in the School of Pharmacy. (An earlier incarnation of the center was known as the Program Evaluation and Research Unit.)

IRC is notable in its scope. The center’s work spans 47 counties in Pennsylvania and four in Western Ohio. Its experts work with urban and rural community members, health care professionals, including first responders, managed care organizations, criminal justice systems, veterans and universities.

At Pitt’s School of Medicine, for example, medication-assisted training is now part of the curriculum. Trainers from IRC will instruct hundreds of medical students over a period of three years, preparing them to prescribe evidence-based medications and provide support services to people with opioid use disorder.

Why Pitt?

We roll up our sleeves to tackle big problems.

“Their efforts to facilitate the health of rural Pennsylvanians are impressive,” says Mandy Fauble, vice president of operations at UPMC Western Behavioral Health.

“From reducing suicide and overdose deaths, to improving social networks and data tracking, the [Implementation and Research Center for Healthy Communities] team builds local skills and infrastructure to serve the communities and improve sustainability.”

Building healthy communities

The Implementation and Research Center for Healthy Communities (IRC) at Pitt Pharmacy is more than 30 professionals working to confront substance use disorder and help community members live fuller lives. With expertise in research, social work, implementation science, data analysis and professional education, this team:

- Offers technical assistance to more than 200 Centers of Excellence for opioid treatment through special funding from the Pennsylvania Department of Human Services.
- Works in 47 Pennsylvania counties and four in Ohio.
- Has instructed more than 5,000 EMS personnel and firefighters across Pennsylvania and Ohio via the Strategies to Coordinate Overdose Prevention through Emergency Medical Services.
- Treats more than 20,000 patients across the commonwealth through its substance use disorder Screening, Brief Intervention and Referral to Treatment program.

SPECIALIZED CARE FOR SPECIAL PEOPLE

For 60 years, Pitt Dental Medicine has demonstrated how to care for people with cognitive and physical challenges.

When it comes to providing dental care to people with special health care needs, you need a specialized team of professionals. That's what the School of Dental Medicine has been delivering at its Center for Patients with Special Needs (CPSN) for more than 60 years.

By providing compassionate, comprehensive care to patients who might otherwise go without, Pitt Dental Medicine is reaching an often-underserved population.

This segment of the population is often unable to manage their own basic oral hygiene, and the need for quality, compassionate care is essential, notes Lynne Taiclet, assistant professor and past-director of the CPSN (2009–2024). “The CPSN is seen as the end of the road for many of our patients,” says Taiclet. Many dental providers lack the training, facilities or resources needed to serve patients with physical, cognitive and/or behavioral challenges. Patients travel from hours away for the unique facilities and care provided in the CPSN.

At the center, Pitt Dental Medicine integrates anesthesiology with multidisciplinary care. Dental anesthesia residents work alongside dental students and faculty to provide sedation when needed.

“IT’S NOT UNCOMMON TO GET A HUG FROM A PATIENT OR A CAREGIVER.”

CRAIG MCKENZIE

The center is designed for accessibility, ensuring that patients with mobility challenges can move through the space to get the care they need.

Craig McKenzie, assistant professor of dental anesthesiology, now directs the center. He highlights the value of treating patients in their own wheelchair rather than transferring them to a dental chair. “How much more comfortable is that? For the patient to be in something that’s more familiar to them rather than putting them in a whole new environment?” he says. “We can wheel them right into the dental operator and then use our overhead lights and all of our equipment.”

Pitt DMD and dental hygiene students at the clinic receive didactic instruction and a structured orientation led by faculty, including a detailed review of individual patients during their required coursework at the clinic. This helps ensure the students are prepared clinically and emotionally to provide comprehensive care. “Every student graduates from Pitt Dental Medicine with competency treating patients with special health care needs,” McKenzie says. “This isn’t an elective.”

Learning to provide care for all patients can be a transformative experience. “It’s not uncommon to get a hug from a patient or a caregiver after they’ve been searching for a better way to get dental care for years,” McKenzie says.

“One of the most rewarding parts of working in the CPSN is the feedback I receive from graduates that they are successfully providing dental care for those with disabilities as part of their practice,” Taiclet says.



Pitt nursing student Hope Karnes with a nursing home resident

RETHINKING NURSING HOME CARE

Public Health and Nursing engage students with ‘teaching nursing homes.’

A decade ago, Taylor McMahon planned to pursue a career in emergency medical care yet took a position in long-term care to gain experience. She ended up falling in love with working with older adults and is now director of nursing at Presbyterian SeniorCare Network.

“This work is truly nurse-driven and involves critical thinking and a lot of autonomy,” says McMahon. “I can see the impact of my work improving the quality of life for these folks.”

Yet sometimes nursing students need a nudge to become aware of the rewards of geriatric nursing. “In the past, there has been a preference for acute care clinical placements over nursing home clinical placements by both faculty and students,” says Elizabeth Schlenk, former associate dean for graduate clinical education and associate professor emeritus of health and community systems at Pitt’s School of Nursing. “Often students want the intensive care units, maternity or pediatrics.”

In July 2021, with foundation and community partners, notably the Jewish Healthcare Foundation and The John A. Hartford Foundation, Pitt’s Schools of Nursing and Public Health revamped a “teaching nursing home” initiative (a concept from the ’80s then advanced by the Robert Wood Johnson Foundation).

Howard Degenholtz, professor of health policy and management at Pitt’s School of Public Health, says, “When the pandemic exposed our inadequacies in caring for elderly residents in long-term care,

"THIS WORK IS TRULY NURSE-DRIVEN AND INVOLVES CRITICAL THINKING AND A LOT OF AUTONOMY. I CAN SEE THE IMPACT OF MY WORK IMPROVING THE QUALITY OF LIFE FOR THESE FOLKS."

TAYLOR MCMAHON

we said, 'let's dust off this idea [of the teaching nursing home]' and see what can be learned from the past and really think about what we can do today to engage schools of nursing as well as nursing homes."

Schlenk says the three-year pilot "has really shown us that by introducing nursing students to geriatric nursing, we can break the stigma of working in a nursing home, and now

we have true champions for working in long-term care facilities."

After the successful conclusion of the pilot, the initiative was officially named the Pennsylvania Teaching Nursing Home Collaborative, growing to 30 schools of nursing and 78 nursing homes across Pennsylvania. The goal is to expand nationwide.

Today, McMahon helps nursing students recognize the intellectual challenges that come from working in long-term care when she presents at orientation programs at the School of Nursing. "It is really about looking at what matters to each individual older adult that we care for," says McMahon.

McMahon is happy to play her part in encouraging the next generation of nurses to consider her field: "Working with the elderly has changed my life personally and professionally and just made me a better person."

Why Pitt?

We're restoring mobility and confidence.

"That first time getting a full gait, a full run... Feeling that wind again was probably the first time that weight lifted off my shoulders. It was probably the first time since all of this occurred that I felt more like myself.

"It is cool to hear what they're working on now. I can't even imagine what they'll think of next."

—Ron Strang

MUSCLE MEMORIES

Ron Strang's thigh muscle regrew thanks to an experimental regenerative therapy.

In 2010, then-Sgt. Ronald Strang was leading a squad of Marines on a routine foot patrol through a village in Afghanistan when a roadside bomb exploded and destroyed most of the muscle in his left thigh. After multiple surgeries, he still walked with a cane. He volunteered for a U.S. Department of Defense-sponsored trial at Pitt to try to improve his mobility.

In 2012, Peter Rubin, who holds the UPMC Chair of Plastic and Reconstructive Surgery and is the chair of plastic surgery at Pitt, surgically excised scar tissue from Strang's disfigured thigh and placed into the void a sheet of extracellular matrix, or ECM, developed by Stephen Badylak's team at the University's McGowan Institute for Regenerative Medicine. As the biomaterial broke down, it released natural signaling molecules that promoted new muscle and blood vessel growth. Soon after the operation, Strang could stand, walk and run again.

In Nature Regenerative Medicine in 2016, the study team reported that all 13 participants, including Strang, experienced measurable improvements in muscle bulk, strength, range of motion and function.

Badylak, now emeritus professor of surgery, and his team have since developed an ECM powder and a minimally invasive form of the compound that's drawn into a syringe as a liquid and then solidifies after injection into the body. The hydrogel will soon be tested by Warrendale-based ECM Therapeutics where Badylak is executive chief science officer.

Rubin is now leading a study that uses a patient's own fat cells to treat facial disfigurements and another that uses the cells to repair burn injuries.

At a 2025 reunion, Strang enjoyed hearing what the researchers have been up to. "It is cool to hear what they're working on now. It's been great to hear them talking about how [the approach] is so much better: 'We can just stick it in a needle and put it in people.' That's only taken 10 years. It's wild to see what the future holds and how much more they can do."



Ron Strang

Our drive to do good

Faculty and students are hitting the road to make sure no one is left behind. A new fleet of vehicles, fueled by passion, offers expanded access to care, as well as representation in research for people who have difficulty getting to an academic medical center.

Worth the trip: warriors

The advanced capabilities of Pitt's Neuromuscular Research Laboratory/Warrior Human Performance Research Center (NMRL) are now on the go. Starting in October 2024, a mobile research vehicle (MRV) has been making visits to sites across the country to conduct research on military recruits with a multidisciplinary team

of faculty and graduate students.

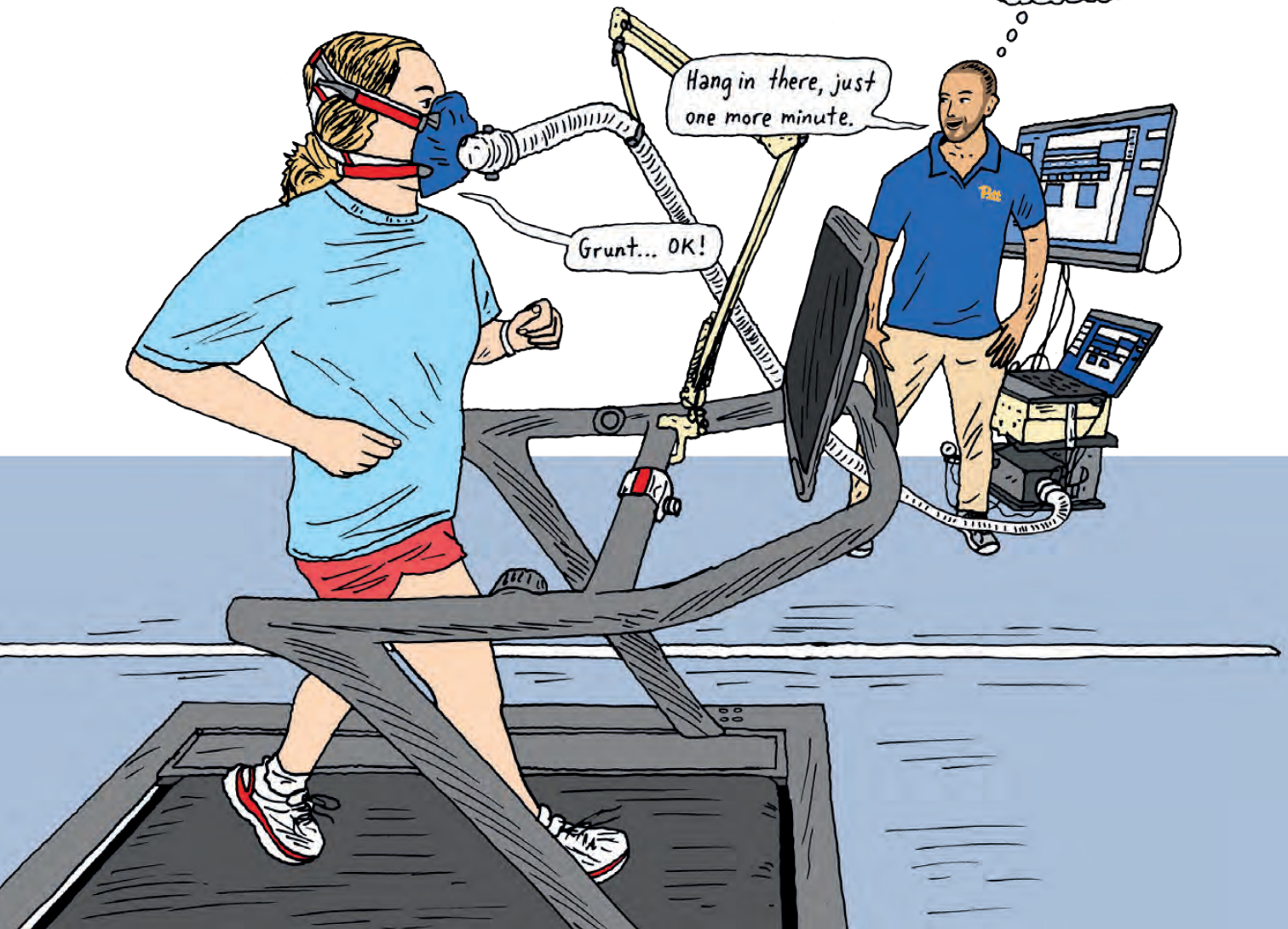
In its first year, the vehicle traveled approximately 7,000 miles, heading to the University of Kansas, the U.S. Naval Academy and Marine Corps Base Quantico.

Brian Martin, NMRL associate director and assistant professor of sports medicine and nutrition, School of Health and Rehabilitation Sciences, designed and customized

the MRV with sophisticated scanning and monitoring equipment and unique data collection capabilities. He believes it's the only mobile unit doing such research.

Martin expects the MRV will also be used for community health screenings and performance testing on athletes closer to home.

These cardio-respiratory assessments are gathering great data.





Fueled for eye health

The Brother's Brother Foundation has donated two vans to the Eye & Ear Foundation, one that became the Communication Van and one that's known as the eyeVan. **The eyeVan is essentially an eye doctor's office on wheels**—equipped with technology to provide exams, screenings and treatments for some of our most vulnerable neighbors; the van visits food banks, senior centers and community clinics. The eyeVan is an outreach program of the Department of Ophthalmology and is run by Evan "Jake" Waxman, Pitt professor of ophthalmology.

With Pitt medical students, Waxman in 2005 established Guerrilla Eye Services, now known as Eyes on Wheels, a student-run program dedicated to eliminating barriers to care for patients in Western Pennsylvania. Eyes on

Wheels offers free, comprehensive eye exams—as well as free glasses—to people in the Pittsburgh region while offering students opportunities to interact with patients and experience hands-on care early in their educations.

Recently, the Falconi family car dealerships donated a cargo van to Eyes on Wheels so that med students, residents and faculty can transport ophthalmology equipment to remote clinics; those crews rotate through approximately 10 primary care and community sites a month.

eyeVan missions:
50+ annually

Eyes on Wheels:
24+ events annually

Communication in the real world

Early detection and treatment of speech and hearing issues can dramatically improve communication, social engagement, mental health and overall quality of life. The Pitt/UPMC Communication Van, an outreach program headed by audiologist Catherine Palmer, Pitt's chair of communication science and disorders, brings professional hearing and communication evaluations straight to neighborhood centers, senior residences, schools and community events, meeting people where they are. The program is even giving away hearing aids.

The van will also help Pitt otolaryngology and communication science and disorders faculty take research into the community.

When Mandy Hampton Wray, an associate professor of communication science and disorders, seeks children to participate in her

research on stuttering, the subjects tend to be those who can easily get to her campus lab. So she's excited to start using the new Pitt/UPMC Communication Van to take her research on the road and include a broader pool of participants.

"We can go to places that feel comfortable, that are local," says Hampton Wray.

She notes that testing outside a clinic or academic medical center captures the everyday environments that shape how people communicate, like background noise, social settings and environmental stressors.

I haven't had my hearing tested in years.



Communication Van:
30 events annually

Free community communication clinics:
50+ events annually

NEIGHBORS, NEAR AND FAR

As we work toward radically improving the health of all, we have plenty to learn from our neighbors, who are the real experts regarding their own challenges and triumphs. Likewise, our opportunities to work with partners across the globe has been transformative.

TAKING CARE TO THE STREET

Students listen first in the Street Medicine at Pitt program.

Trust is key to the relationship between a provider and a patient. The student volunteers of Street Medicine at Pitt know that especially well.

Since 2021, the interprofessional, student-run group has led walks around the streets of Pittsburgh to serve people who are homeless. Accompanied by faculty physicians, students carry medications, food, clothes and other supplies, but they're sure to let those they encounter guide what the group provides. Some living on the street are wary of medical treatment after earlier experiences. Many just want a sympathetic ear.

THIS YEAR MARKED THE LAUNCH OF THE FIRST-EVER STREET MEDICINE LAW PRACTICUM.

The students draw on the philosophy of School of Medicine alum Jim Withers, the street medicine physician and founder of Operation Safety Net who emphasizes building relationships with those he serves.

From the organization's beginning, Antonio Gumucio—a Pitt Med MS alum, public health student, emergency medical technician and the group's cofounder and first president—proposed that Street Medicine at Pitt emphasize interprofessional collaboration. Membership now includes more than 100 student volunteers spanning the School of Medicine, School of Health and Rehabilitation Sciences, School of Public Health, School of Law and the School of Social Work.

"Beyond outreach, we've continued growing our student-led initiatives aimed at addressing unmet needs within the population we serve," says Allyson Andrews, the group's vice president

OT alum builds on Street Medicine experience

Julia Lam, former Street Medicine at Pitt president, founded the nonprofit Outreach Therapy shortly after graduating with her doctorate in occupational therapy from the School of Health and Rehabilitation Sciences. The program goes outdoors, to shelters and to residences to provide occupational therapy to people experiencing and transitioning out of homelessness.

"Our model of care expands upon existing models of homeless health care to focus on skills and resources to bridge the gap from survival of homelessness to thriving in a permanent transition into housing," Lam says.



Julia Lam, Kathleen O'Connor and faculty adviser Max Hurwitz on street rounds in 2023

who also received her MS at the med school. Recent work has included a teler dermatology initiative, a sound barrier engineering project to reduce noise exposure and an effort to increase access to essential menstrual health and hygiene supplies.

This year marked the launch of the first-ever Street Medicine Law Practicum, developed at Pitt. Through the program, law students collaborate with street medicine teams on legal barriers affecting the unhoused population.



NAVIGATING CANCER TOGETHER

Partnership seeks to support people living with cancer, on their terms.

Research shows that underrepresented and low-income communities face higher cancer risks, fewer resources and worse health outcomes. A new community initiative led by Margaret “Peggy” Rosenzweig, an oncology nurse practitioner, researcher and Distinguished Service Professor in the University of Pittsburgh School of Nursing, is working to address these disparities by providing crucial resources and support to people living with cancer in Pittsburgh.

A cross between a support group and an educational resource, the initiative provides evidence-based programming to patients with cancer from underserved communities at Pitt’s Community Engagement Center (CEC) in Homewood. The center plans to offer a range of holistic services, from psychological counseling to grief support to artistic outlets, that allow patients and families to express feelings that are not typically discussed during cancer diagnosis and treatment.

The initiative is supported by UPMC Hillman Cancer Center, as well as members of the Schools of Nursing, Social Work and Public Health. Programming will evolve as coordinators collect surveys on the community’s top needs, but Rosenzweig said it will continue to serve as a center for connecting families and patients with cancer to needed resources—and to each other.

“It’s a space where patients and families can acknowledge how difficult cancer has been emotionally and physically,” Rosenzweig says. “There seems to be a need for a place that allows people to come together, in community, to help address the trauma and the experience of cancer.”

WUNDERKINDS TRY OUT AI WITH MEDICAL IMAGING

Teens excel in this summer program.

Late in June 2024, a casual conversation about artificial intelligence between a reporter and two recent high school graduates escalated quickly into a technical discussion about the localization and classification of the knee joint.

Less than two minutes in, the reporter recognized he was clearly outclassed by the teenagers and asked them to explain in layperson’s terms.

They responded that “basically” they had trained an AI model to identify a knee joint within plain knee radiographs for pre- and postsurgery purposes. “We got a taste of the practical application of AI, especially with relation to medical imaging—its real-world significance,” said Aaron Peng, who was headed to the University of Pittsburgh that fall.

Peng and his friend were among 24 high schoolers spending a week at an AI summer school led by Pitt’s Computational Pathology and AI Center of Excellence (CPACE), the School of Health and Rehabilitation Sciences Pitt HexAI Lab and the IEEE (Institute of Electrical and Electronics Engineers) Computer Society.

In a week’s time, the students went from an introduction to the foundations of artificial intelligence to hands-on coding instruction to training the knee model, which was their culminating project. The program has continued each summer since.

Ahmad P. Tafti, a School of Health and Rehabilitation Sciences assistant professor of health informatics, says the AI summer school was designed for young people to “enhance their competitiveness for future academic programs and offer insights into potential careers in health care and technology, particularly in AI-powered medical imaging informatics.”

“We got a taste of the practical application of AI, especially with relation to medical imaging—its real-world significance.”

AARON PENG

EVOLVING PROGRAM MEETS CHANGING NEEDS

The Grace Lamsam Pharmacy Program has teamed up to serve vulnerable populations for 30 years.

Grace Lamsam was a pharmacist and new faculty member at Pitt's School of Pharmacy when, in 1995, she launched a program that emulated community-oriented projects she had taken part in during her training in Minneapolis. At first, it largely provided free medications to people without homes. Through the years, it grew to serve more uninsured people and the working poor.

Sharon Connor, the current director of what's known as the Grace Lamsam Pharmacy Program for the Underserved, first participated in the program as a pharmacy resident. She returned to Pitt to lead it when Lamsam joined a cloistered convent and adopted the name Sister Mary Grace.

About 150 pharmacy students and residents now participate each year, contributing to patient intake, taking patients' blood pressure, providing medication counseling and working with interprofessional teams to serve those with few other options for health care.

"You're not just watching things happen, you're a part of everything," says Martha Ndung'u, an assistant professor of pharmacy and therapeutics and residency program director for the Grace Lamsam Program. She first took part as a first-year pharmacy student at Pitt. "You see the students take ownership of the work, and I think that's the key."

The program's main site is the Birmingham Free Clinic, which opened in 1994 and first operated out of a Salvation Army homeless drop-in center on the South Side. The clinic later moved to the UPMC Mercy Community Care Building, where it's now open six days a week. Connor says Mary Herbert, the Birmingham

clinical director hired by Lamsam, is "the glue that keeps things running strong."

The Grace Lamsam Program has also shifted over the years along with pharmacists' expanding role in health care. They now help manage care for certain health conditions in conjunction with physicians.

That makes their role in interprofessional care teams even more essential—which student volunteers get to experience firsthand. Students in pharmacy, medicine and nursing all get to see what each other contributes to treating a patient.

"You cannot be expected to do this all on your own when there's so much need," Ndung'u says. "Understanding that, you're going to problem-solve in that team to do the best you can for every single patient that you serve."

The Grace Lamsam Pharmacy Program for the Underserved*

6,000 prescriptions to patients in need

\$750,000 approximate value in medication provided free of charge

3,000 pharmacist and pharmacy student volunteer hours

3,000 approximate number of patients served at clinics, shelters and drop-in centers

150 pharmacy students and residents engaged

*Recent yearly totals

A SPACE FOR FORGOTTEN GRIEVERS

Camp Wakchazi allows kids to open up about siblings they've lost.

When a child dies, our thoughts turn first to the parents. But often overlooked is the brother or sister of the child—the "forgotten grievers." In 2017, UPMC Children's Hospital of Pittsburgh launched a weeklong summer camp, Camp Wakchazi, for children who've lost a sibling.

The idea for the camp originated with Carol May, nurse and director of the Division of Palliative Medicine and Supportive Care in the Department of Pediatrics, who suggested to a hospital social work intern that a dedicated sibling bereavement camp might help fill a need. With May's guidance, a multidisciplinary team turned it into reality. Today, Camp Wakchazi takes place every June and is funded fully through philanthropy from people



who believe in giving grieving children a place designed just for them.

The camp functions as a judgment-free environment where children can talk about their siblings in ways that are often difficult in everyday life.

Counselors—who include students from throughout the health science schools—are trained to help break down barriers to grieving.

The interdisciplinary nature of the staff has also led to many campers becoming curious about those same career fields.

Melanie Szigethy, the camp coordinator, remembers a boy who unexpectedly opened up while playing kickball because it had been his sibling's favorite sport. The connection helped him speak about his loss for the first time that week.

Camp Wakchazi, inspired by the sunflower's tendency to turn towards light, offers a supportive space where children can connect with each other and with the adults guiding them to "find light on the darkest days," says Szigethy. Each year, new seeds are planted and connections blossom anew.



Notable

The Homewood Community Engagement Center is part of the University's Neighborhood Commitments, long-term partnerships that focus on the Oakland, Homewood, Hill District and Greater Hazelwood neighborhoods. Pitt and its neighbors built these partnerships to provide mutually beneficial collaborations between the University and the local community.

As of January 2025, they'd sponsored **184 unique programs** since opening.

In FY 2025, the Homewood and Hill District Community Engagement Centers welcomed **7,942 visitors**.

THERE'S HOPE FOR HANDWRITING

This OT offering is one of a number designed for our neighbors in and near Homewood.

Every week at the Community Engagement Center in Homewood, one of the University's place-based partnerships, kids scratch away with pen and paper with Pitt occupational therapy (OT) students at their side.

In an era dominated by digital communication, handwriting remains a critical foundational skill—especially for young learners. Hope for Handwriting, a program developed through the School of Health and Rehabilitation Sciences, offers handwriting support to children through one-on-one sessions.

Each child is paired with an OT student who tailors exercises to them. Participants in the program frequently show significant gains in both skill and confidence.

“This is where our students see what occupational therapy can do outside the classroom.”

KELSEY VOLTZ-POREMBIA

“We had one student who was struggling to sit down long enough to write a sentence,” says Kelsey Voltz-Poremba, the program's coordinator and assistant professor of occupational therapy. “By the end, he was writing at the same level as his peers at school, with higher abilities to focus and greater levels of confidence.

“Handwriting is often the entry point. It allows us to address a child's fine motor coordination, attention and even emotional regulation—all essential for academic success.”

At the same time, OT students benefit from hands-on experience, learning to assess, adapt and build rapport with young clients.

“This is where our students see what occupational therapy can do outside the classroom,” Voltz-Poremba says. With growing community interest and a waitlist already in place, the program is exploring future expansion.

Hope for Handwriting is one of 15 education and wellness programs Pitt faculty and students staffed at the Community Engagement Center in Homewood in FY 2025. The School of Health and Rehabilitation Sciences has launched an evidence-based whole-health free clinic that includes aphasia support, audiology, physician assistant primary care and chiropractic care through its student-led and faculty-supervised Wellness Pavilion, a space that's interdisciplinary and designed for residents of Homewood and surrounding communities. The Pavilion exists so that community members feel heard and empowered to improve, maintain and take control of their health and wellness.

Enhancing health abroad

Pitt Health Sciences' global reach includes **partners in 91 countries**, with faculty conducting **research in 30 countries**.

The Health Sciences' Office of Global Affairs is looking to engage with even more communities across the world, supporting health initiatives through partnerships that start at the ground level, working directly with local residents to identify and meet needs. Relationships are key, says Jessica "Jessie" Burke, Pitt's associate vice chancellor for global affairs in the health sciences and a professor of behavioral and community health in the School of Public Health. **She notes that Pitt teams partner with communities as opposed to diving in to say, in effect, "Here's what you should be doing."**

BUILDING A MODEL FOR HEALTH CARE IN GORONGOSA

National park restoration project heals.

In the late 1970s, a civil war lasting 16 years swept through Mozambique, leaving behind a trail of devastation. More than a million lives were lost, and the land was scarred. In the central part of the country, in Gorongosa National Park, more than 90% of the park's large mammals disappeared.

Today, the park has become a beacon for ecological restoration and also a model for community-driven development through the Gorongosa Restoration Project (GRP), which supports the park's wildlife and the more than 250,000 people living in surrounding communities.

Pitt health sciences faculty and staff are engaged in humanitarian efforts with GRP. Peter Santa Maria, a professor of otolaryngology in the School of Medicine, routinely travels to Mozambique with researchers, medical professionals and others who are deeply involved with the GRP to improve health and well-being in the region. He's inspired others at Pitt to join him.

"There is a strong and deep relationship between Pitt and the GRP," notes Santa Maria. "Together with the Mozambican government we will create an exemplary nature-based economy and health system model that will inspire sustainable development, not only in Mozambique, but throughout Africa and beyond."

In November 2025, a small team from Pitt Health Sciences made another visit to Gorongosa to deliver medical supplies and train park wardens and other GRP staff in emergency medicine.

Emergency medical training is sorely needed in Gorongosa, says Thomas Platt, professor and chair of community health services and rehabilitation sciences in Pitt's School of Health and Rehabilitation Sciences. For example, there have been two recent drownings at a hotel pool in the area. "The deaths may have been prevented if there was a continuum of care. Staff nearby were able to apply basic life-saving skills, but there was no follow-up care," he says. "We want to empower folks by giving them the opportunities to grow their knowledge and abilities to help each other."



The filmmaker partners with women in remote villages in Nepal.

FILMMAKING RAISES AWARENESS OF HEALTH THREATS IN NEPAL

Baumann collaborates on films about a traditional menstrual practice.

As part of a traditional practice called chhaupadi, Nepali women often leave their homes when they are menstruating. Some take shelter in a hut or shed, where they risk exposure to snake bites, the cold, and, as they build fires to stay warm, smoke inhalation. Many women take their newborns with them, which presents health risks for the children.

Sara Baumann, documentary filmmaker and Pitt assistant professor of behavioral and community health sciences, has partnered with women in the southern portion of Far West Nepal

to use a method she developed called collaborative filmmaking. The women learn how to use cameras and document their experiences. The films are then used to "deepen understanding of complex human behaviors, raise awareness, influence policies and shift behaviors to improve public health," she says. The stories need to be told from within the

community where the women live, from their own perspectives, Baumann says. Doing so brings attention to their lived experiences in hopes of ensuring their health and safety and reducing stigma. The collaborative films have been screened at several film festivals, including the Kathmandu International Mountain Film Festival in Kathmandu, and were also shared at the traveling version of the festival to remote communities across Nepal.

As she continues her collaborative work from her part-time home in Nepal, Baumann focuses on honoring Nepali religious and cultural traditions and centering community knowledge, voices and priorities in public health interventions.

THE FILMS ARE USED TO "DEEPEN UNDERSTANDING OF COMPLEX HUMAN BEHAVIORS, RAISE AWARENESS, INFLUENCE POLICIES AND SHIFT BEHAVIORS TO IMPROVE PUBLIC HEALTH."

SARA BAUMANN



The strength of six

A deeper dive into Pitt's powerhouse
health sciences schools



“The collaborative spirit at Pitt aligns with our mission to improve oral health through our teaching, service and research.”

SERVANT LEADER

Marnie Oakley has been excited about Pitt since the age of 14 when she traveled across the state from her 11,000-person hometown of Mountaintop, Pennsylvania, on her first visit to the Pittsburgh campus to watch her brother play football as a Panther. She earned both her BS (in biology) and her DMD from the University before serving an active duty, four-year tour as a dental officer in the U.S. Navy. She says that service time further bolstered her work ethic and determination when facing challenges.

In 1996, Oakley joined Pitt Dental Medicine as a clinical instructor in the Department of Oral Medicine and Pathology, while also working as a private practice dentist; she was appointed assistant professor in the Division of Restorative Dental Sciences in 1999. Oakley went on to serve in a number of leadership roles at the school, including chair of restorative dentistry and comprehensive care, as well as vice dean and associate dean for clinical affairs, before being appointed dean in 2023.

Oakley received the President's Citation from the American Dental Education Association (ADEA). She's a graduate fellow of the ADEA's Leadership Institute and a senior consultant for the Academy of Advancing Leadership, consulting and giving seminars on various leadership topics for academicians across the country. She holds an Executive Coaching Certificate from Berkeley Executive Coaching Institute.

A strong believer in servant-minded leadership, Oakley has ambitious goals for collectively advancing the school with faculty, staff and students. She's committed to expanding access to care in rural and other underserved areas, establishing new workforce pipelines and building on the school's clinical and translational research.

On exam days and at other times she can be seen at Salk Hall eliciting big smiles while mitigating stress within the Pitt Dental Medicine community with her two golden retrievers, Steve and Teddy, who are certified therapy dogs.

Facts and figures

447

Total enrollment

198

Faculty

No. 11 in National Institutes of Health research funding among schools of dental medicine

(Blue Ridge Institute for Medical Research, 2025)

DMD (Doctor of Dental Medicine) Class of 2025

98%

On-time graduation rate

100%

postgraduate placement rate

99% first-time pass rate on the restorative section of their clinical licensure examination

100% first-time pass rate on the periodontics section of their clinical licensure examination

DMD Class of 2029

35 Undergraduate schools represented

18% First-generation students

48% Pennsylvania residents

FY 2025 was a record-breaking year for clinical productivity. The school's student general dentistry and resident specialty practices had

more than 70,000 appointments.

Many of those patients are covered by Medicaid (45+%) and would not find care elsewhere.

The school's Center for Patients with Special Needs has served the community for **60 years.**

ACADEMIC PROGRAMS

Dental Hygiene

Associate of Science in Dental Hygiene, AS
Bachelor of Science in Dental Hygiene, BS
Hybrid Dental Hygiene Bachelor's Degree, BS

Dental Assistant Training Program

Certificate hybrid program

Predoctoral

Doctor of Dental Medicine, DMD

Advanced Standing

DMD International Advanced Standing Program

Oral and Craniofacial Sciences

Doctor of Philosophy in Oral and Craniofacial Sciences, PhD
Master of Science in Oral and Craniofacial Sciences, MS

Simultaneous Degree Options

DMD and either MS or PhD in Oral and Craniofacial Sciences

Advanced Dental Specialty Education and Residency Programs

Certificate programs in the following dental specialties:
Dental Anesthesia, Endodontics, General Practice Residency (GPR),
Oral and Maxillofacial Pathology, Oral and Maxillofacial Surgery,
Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry,
Periodontics, Prosthodontics

Of note

A top research institution for dentistry, **Pitt Dental Medicine is particularly well known for these research areas:**

- Craniofacial and dental genetics
- Regenerative medicine, biomedical engineering, biomineralization
- Chronic disease, notably temporomandibular joint pain
- Cancer and immunotherapy, and immunomodulation

For the third year in a row (2025), the dental hygiene (DH) class graduates achieved a **100% first-time pass rate** on their clinical licensure examination.

The first-time pass rate on the Integrated National Board Dental Examination (INBDE) has been **97–100% for the past three years** (2023–2025).

The school received no formally cited recommendations across all seven examined programs at the April 2025 accreditation review from the Commission on Dental Accreditation.

Pitt Dental Medicine is taking a bold step into the future of dentistry with the implementation of three new **state-of-the-art digital dentistry labs**. Students and residents will obtain hands-on experience with cutting edge digital dental technology while providing patients with the latest in modern dental care.

Rural communities typically have significantly fewer dentists per capita than urban areas. Pitt Dental Medicine is establishing **Regional Training Centers in Titusville, Bradford and Johnstown** to meet the oral health needs of these communities. The centers will offer new professional opportunities to area residents, including training for dental assistants and hygienists, positions that are in high demand.

Class acts

Championing state-of-the-art care for rural health

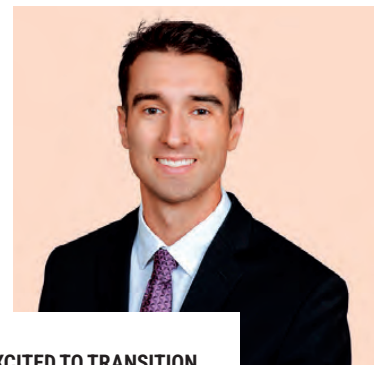
The calling cards for fourth-year dental medicine student **Dakota Volzer**: using intraoral scanners in lieu of traditional impression techniques, making dentures with a 3D printer and honing implant skills—some of the training experiences that will be available for general practice residents at the University of Pittsburgh School of Dental Medicine Regional Training Center at Titusville, which opens in the summer of 2026.

The center will train three general practice residents, part of an initiative to bring care to rural communities with few dentists. Through a partnership with Titusville Area Hospital and the Pitt-Titusville Education and Training Center, the initiative will establish a permanent regional training site that functions as a clinic and a classroom. Pitt Dental Medicine will also open two more Regional Training Centers in Bradford and Johnstown. (See story on page 6.)

Volzer will be part of a team filling an oral health care void by offering care to thousands of residents in those areas—some of whom have never been to the dentist. He's pleased that the latest dental medicine technologies will be used in Titusville, as they are on the Pittsburgh campus.

Volzer says he's excited to transition from academics to "what the world of dentistry looks like outside the school setting."

The faculty Volzer will train under offers another incentive. Volzer is looking forward to working with Lawrence Mauro, a Pitt Dental Medicine assistant professor: "He has experience in mentoring young dentists and in starting new practices, so I'm really excited to work with him and learn from his years of experience."



"I'M EXCITED TO TRANSITION FROM ACADEMICS TO WHAT THE WORLD OF DENTISTRY LOOKS LIKE OUTSIDE THE SCHOOL SETTING."

DAKOTA VOLZER



“The environment across schools strengthens our competitiveness for grants and fosters training opportunities that prepare students at all levels to work effectively across disciplinary boundaries.”

EMPOWERING CARE PROVIDERS

David C. Beck grew up in Lilly, Pennsylvania, where he witnessed firsthand how compassionate clinicians transform lives. Inspired by the interprofessional primary care teams that looked after his family, he pursued a career devoted to clinical excellence, advancing science and preparing the next generation of health professionals. Today, Beck serves as interim dean and professor in the University of Pittsburgh School of Health and Rehabilitation Sciences, bringing a clinician-educator’s perspective and a community-grounded spirit to one of the nation’s leading allied health schools.

From the clinic to the classroom, and from the emergency department to the dean’s office, Beck has focused on expanding access to care, strengthening professional pathways and advancing innovation. During his 16 years at Pitt, he has led pioneering initiatives including the Physician Assistant Studies Hybrid Program, the Doctor of Medical Science and advanced practice provider leadership training programs that prepare clinicians to lead in complex health systems.

He is a nationally recognized leader in physician assistant education, faculty and workforce development, and the integration of digital health into physician assistant training and practice. He is especially known for developing executive and leadership skills for advanced practice providers and advancing higher education–health system partnerships.

A practicing physician assistant for nearly two decades, Beck grounds policy and academic innovation in frontline experience. Nationally, he serves as a commissioner on the PA Education Association’s Doctoral Education Commission and as an elected delegate to the American Academy of Physician Associates House of Delegates.

Guided by the belief that education is a force multiplier for community health, Beck (who holds an EdD and a DMSc) is committed to expanding access, advancing digital and interprofessional care models, and preparing leaders who will shape the future of health care for all people and populations. Above all, his work reflects the promise he made at the start of his career: to improve lives by empowering those who care for others.

Facts and figures

2,020

Total enrollment

(Includes 371 students in hybrid programs and 198 in online programs)

201

Faculty

No. 6 in National Institutes of Health funding of allied health sciences schools

(Blue Ridge Institute for Medical Research, 2025)

\$23.87 million annualized research expenditures

2,339 active clinical partnerships, nationally and locally

In January 2026, most School of Health and Rehabilitation Science (SHRS) programs began the semester in the school’s new flagship location at Fifth and Halket in Oakland, consolidating three SHRS buildings under one roof. The modern teaching facilities are designed to spark further innovation and collaboration.

SHRS faculty and researchers are leading efforts to ensure AI is used responsibly in health care, shaping ethical policies and practices while improving efficiency, effectiveness and patient outcomes. They are also exploring innovative ways to integrate AI into teaching.

Department of Physical Therapy faculty have more NIH career development awards than any other U.S. physical therapy department.

The Bachelor of Science in Health Informatics program is the first undergraduate health informatics program in the country to receive accreditation. Additionally, the Master of Science in Health Informatics program also received its accreditation in health informatics. These recognitions establish Pitt as the leading institution in the country for education and training in this transformative health care field.

DEGREES BY DEPARTMENT

Communication Science and Disorders

Doctor of Audiology, AuD | Speech-Language Pathology, MA/MS | Communication Science, BA | Communication Science and Disorders, PhD

Community Health Services and Rehabilitation Science

Doctor of Chiropractic, DC | Emergency Medicine, BS (on campus), with Degree Completion Entry-point (online) | Rehabilitation Science, BS

Counseling and Behavioral Health

Clinical Mental Health Counseling, MS

Health Information Management

Master of Health Informatics, MSHI (on campus or online) | Health Informatics, BS

The school offers four health informatics certificates (available on campus or online).

Occupational Therapy

Doctor of Occupational Therapy, OTD | Occupational Therapy, MS | Doctor of Clinical Science in Occupational Therapy, CScD (online) | Advanced Practice Certificate in Implementation of Evidence in Clinical Practice (online)

Physical Therapy

Doctor of Physical Therapy, DPT (on campus and hybrid) | with Swanson School of Engineering, DPT and PhD-Bioengineering

Physician Assistant Studies

Physician Assistant Studies, MS | Physician Assistant Studies, MS (hybrid) | Doctor of Medical Science, DMSc (online)

Rehabilitation Science and Technology

Master of Rehabilitation Technology, MRT (hybrid) | Prosthetics and Orthotics, MS

Sports Medicine and Nutrition

Accelerated Master of Science and Master of Science in Athletic Training | Accelerated Master and Master of Science in Nutrition and Dietetics (Dietitian Nutritionist Program) | Nutrition Science, BS | Master of Science in Sports Science, MSSS

PhD Rehabilitation Science available foci:

Counseling, Health Information Management, Occupational Therapy, Physical Therapy, Rehabilitation Science and Technology, Sports Medicine
Communication Science and Disorders offers a postbaccalaureate year.

Class acts

Full plate, future leader

The sign on the French door of her office read, "Please be quiet. Mommy is taking an exam." Still, kids giggled, the dog scratched at the window, and **Elena Luna-Vazquez's** husband blew her kisses from the other side of the glass.

Such was the life of a determined University of Pittsburgh hybrid Doctor of Physical Therapy (DPT) student. "Sometimes it was a bit crazy," says Luna-Vazquez, a Fort Worth, Texas, resident who graduated from the program in December 2024. "We have a blended family of four children and two dogs. Everyone's on their own schedule, but they were all supportive."

Luna-Vazquez received an undergraduate PT degree in Mexico several years ago but only practiced for two years because her family moved to South Korea. When she knew she was coming to the United States, she once again started thinking about her career.

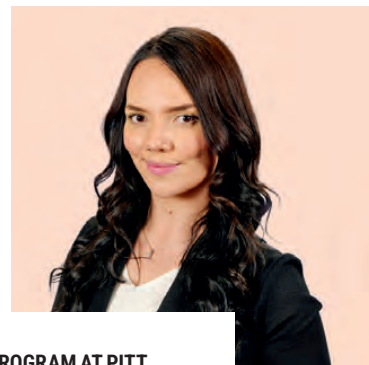
"The program at Pitt was my first choice," she recalls. "Its reputation was excellent, and I had a feeling it would challenge me to be my best." She learned English as she completed the prerequisites.

Professor and DPT Hybrid Option Director Kim Nixon-Cave describes her as a standout: "Elena was very supportive of her classmates who were struggling with course material."

Clinical placements close to home helped Luna-Vazquez gain experience without leaving her family for extended periods. She enjoyed her final rotation at a PT facility where she worked with patients with neurological conditions, as well as many geriatric issues such as Parkinson's disease. She continues to work at the clinic.

"I see Elena as a future leader in the PT profession," says Nixon-Cave.

Indeed—Luna-Vazquez was invited to join the American Physical Therapy Association Leadership Scholars. She's now in a state leadership program. **"My overarching leadership goal is to advocate for both patients and clinicians and to contribute to improving the health care system for the communities we serve."**



"THE PROGRAM AT PITT WAS MY FIRST CHOICE. ITS REPUTATION WAS EXCELLENT, AND I HAD A FEELING IT WOULD CHALLENGE ME TO BE MY BEST."

ELENA LUNA-VAZQUEZ



“The combined strength of our six schools puts us in an extraordinary position to change care for the better.”

INNOVATING AND LEADING AT THE HIGHEST LEVELS

Seeking a better education, **Anantha Shekhar** moved at an early age with an aunt and uncle from a small village in India where his family had no electricity or running water to Bangalore, India’s equivalent to Silicon Valley. There, he ultimately earned his medical degree at St. John’s Medical College before immigrating to the United States, where he earned his doctorate in neuroscience at Indiana University.

It was at IU that Shekhar ascended through leadership roles during a 37-year tenure before coming to Pitt in 2020 as the senior vice chancellor for the health sciences and John and Gertrude Petersen Dean, School of Medicine. His career arc has been marked by more than administrative success; he remains a renowned research scientist and a successful innovator.

Shekhar was a key researcher in the development of a first-in-class drug that treats schizophrenia differently than traditional antipsychotics and seems to cause fewer side effects. (It was a cousin’s struggle with the disease that initially led Shekhar to pursue medicine; his original plan was to become an engineer.)

Shekhar has led studies identifying novel treatments, not only for schizophrenia, but also for depression and anxiety disorders, and has founded multiple biotech companies.

He is a tenured member of the National Academies of Sciences, Engineering and Medicine’s Forum on Drug Discovery, Development and Translation and board member of the Clinical Research Forum. He also serves on the boards of directors for UPMC and UPMC Children’s, Magee-Womens, Presbyterian and Shadyside hospitals.

His vision for the Pitt Health Sciences community: to radically change health and health care for the better. “To accomplish this,” he says, “we seek certain qualities in prospective students as well as in our faculty, administration and all of our associates—creativity, which is essential to great care and research, compassion, which is the healer’s north star, and leadership capacity, which is sorely needed for real change.

“These qualities have come to define the culture of the School of Medicine and all of the health sciences schools at Pitt.”

Facts and figures

1,345

Total enrollment

2,923

Faculty

The school consistently **ranks among the top U.S. medical schools for National Institutes of Health funding.**

2025 NIH rankings:

8th School of Medicine

The school ranks 6th when including Pitt ob/gyn faculty grants through Magee-Womens Research Institute (MWRI).

1st Physical Medicine

1st Psychiatry

2nd Microbiology

2nd Pharmacology

3rd Ob/gyn (MWRI)

3rd Otolaryngology

4th Anesthesiology

5th Neurosciences

6th Internal Medicine

6th Surgery

7th Dermatology

9th Anatomy/Cell Biology

10th Radiology

19 school departments **ranked in the top 20** in 2025.

These programs give MD students opportunities to deepen their understanding of health issues throughout their years at Pitt:

A **Longitudinal Research Project** extends throughout their time in medical school. Pitt’s School of Medicine was one of the first in the country to require such a project.

The **Longitudinal Alliance Program** pairs each student with a patient to foster that relationship throughout their education.

The **Community Alliance Program** connects teams of students with community nonprofits to learn about their organizational missions and work on a community-driven project.

ACADEMIC PROGRAMS

Doctor of Medicine, MD

Also a 3-year Primary Care Accelerated Track

Doctor of Philosophy, PhD programs (can be MD/PhD)

Biomedical Informatics

Cell, Molecular and Systems Biology

Three options: Cell Biology and Molecular Physiology |

Integrative Systems Biology | Molecular Genetics and

Developmental Biology

Clinical and Translational Science

Computational Biology

Interdisciplinary Biomedical Graduate Program

(Students graduate in either Cellular and

Molecular Pathology or Molecular Pharmacology)

Microbiology and Immunology

Molecular Biophysics and Structural Biology

Neurobiology/Neuroscience

Oncology

Master of Science, MS programs

Biomedical Informatics

Biomedical Sciences

Computational Biomedicine and Biotechnology

Clinical Research

Health Professions Education

Certificates

Biomedical Informatics | Clinical and Translational Science for

Doctoral Students in the Health Sciences | Clinical Research |

Health Professions Education | Hearing and Vision Sciences

Medical students can also apply to the school's Physician Scientist Training Program or Clinical Scientist Training Program and earn a Master of Science.

While enrolled at Pitt, one of the world's leading medical research institutions, MD/PhD and PhD students may take advantage of formal partnerships with Carnegie Mellon University programs.

Of note

The future of care: Pitt plans to transform and revolutionize health care by leveraging AI technology to scale disease management and reduce costs through GAINMED. That platform will advance P5 medicine, which is predictive, preventive, personalized, precision and participatory care.

World-class centers and institutes

The School of Medicine is home to more than 70 centers and institutes.

To name just a few:

- Aging Institute
- Bethel Musculoskeletal Research Center
- McGowan Institute for Regenerative Medicine
- Thomas E. Starzl Transplantation Institute
- Trivedi Institute for Space and Global Biomedicine
- UPMC Vision Institute
- Vascular Medicine Institute

Class acts

Callings

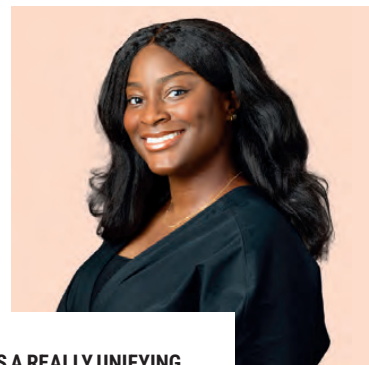
"How can I expect to become a doctor, when I don't see many who look like me?" asked a middle school student from the Hill District. "Don't count yourself out" was the simplified response.

Tonge Enoch, a fourth-year Pitt medical student who cocreated the Mini Medics program in the Hill District to introduce careers in medicine to youth there, shares the anecdote. Enoch remembers how a fellow med student jumped in with a story of his own humble beginnings to make the point that what might seem impossible is possible.

"It was a really unifying moment," says Enoch. "I could see on the student's face that they weren't expecting that answer—that your present circumstance doesn't preclude you from making an impact like caring for patients if that's what you feel called to do."

A key interest for Enoch is community medicine, which she says traces back to her childhood in Cameroon, where access to quality medical care is lacking for many. The experiences she's had running Mini Medics have further bolstered that interest, she says.

Enoch, a Pitt Med social medicine fellow whose full plate has included holding leadership positions with the Student National Medical Association, plans to train in anesthesiology. She likes the idea of caring for the patient as an individual, but says at some point in her career, she might "take a step back and look at the broader picture of health infrastructure" and pursue a career in public health.



"IT WAS A REALLY UNIFYING MOMENT."
TONGE ENOCH



“Research is powerful, and few may realize the significant role it plays in nursing. It has the potential to save lives.”

NURSE AND THOUGHT LEADER

As a PhD and RN whose career has kept her on the move, **Christine E. Kasper** has shaped nursing research, policy and education across the country. Originally from Chicago, Kasper has since taught at premier nursing schools at the University of Wisconsin–Madison, University of California, Los Angeles, and Johns Hopkins University. Before joining the University of Pittsburgh, she served as dean of the University of New Mexico School of Nursing, where enrollment spiked 35% in three years under her tenure.

Kasper said she moved to Pittsburgh—a “mecca” for health care—because of Pitt’s globally respected School of Nursing. Since taking the helm as dean in 2023, she has made it her mission to bolster the school’s reputation as a research powerhouse. In addition to supporting faculty-led studies, she is working to expand research opportunities for undergraduate students, which is uncommon for nursing schools.

She brings to the role a wealth of knowledge and research experience, including more than 200 peer-reviewed papers, books and presentations on a range of medical subjects, including her research focus: the breakdown and regeneration of skeletal muscle. As a former senior nurse executive in the U.S. Department of Veterans Affairs, she advised the agency’s top nursing officer and studied the pathobiology of illnesses linked to the Gulf War, as well as the long-term effects of metal shrapnel trapped in the body.

Kasper served as the editor of the Annual Review of Nursing Research for more than a decade and was the founding editor of Biological Research for Nursing. She is a fellow of several prominent professional organizations, including the American Academy of Nursing and American College of Sports Medicine. In 2015, she was inducted into the Sigma Theta Tau International Nurse Researcher Hall of Fame for her research on traumatic brain injuries in military members.

Facts and figures

1,269
Total enrollment

90
Faculty

No. 16 in National Institutes of Health funding among schools of nursing
(Blue Ridge Institute for Medical Research, 2025)

Once again, **Pitt’s nursing programs** have been recognized as **among the very best according to U.S. News and World Report.**

2026 review rankings:

BSN 8th in country

2nd DNP nurse anesthesia

5th DNP mental health nurse practitioner

For the fourth year running, Pitt was designated as a Best School for Men in Nursing in 2025.

It was one of 16 schools the American Association for Men in Nursing recognized for success recruiting, retaining and providing a supportive educational environment for male nursing students while simultaneously promoting the contributions of male nurses in the workforce.

Pitt educates nurse leaders. The president of the American Association of Colleges of Nursing is a Pitt Nursing alum, and a number of the school’s alumni lead hospitals, foundations, nonprofits, academic institutions and military health care organizations.

ACADEMIC PROGRAMS

Bachelor of Science in Nursing, BSN
Accelerated BSN

Master of Science in Nursing, MSN
Neonatal Nurse Practitioner
Nurse Practitioner (intended to launch fall 2026 online)
Adult Gerontology Acute Care
Family Nurse Practitioner
Psychiatric/Mental Health

Doctor of Nursing Practice, DNP
Health Systems Executive Leadership
Nurse Anesthesia
BSN to DNP
MSN to DNP

Doctor of Philosophy, PhD
PhD in Nursing

The school offers these certificates:
School Nurse PK-12
Nurse practitioner (NP) certifications in—
Adult Gerontology Acute Care
Neonatal
Pediatric Acute Care
Psychiatric Mental Health

Of note

A research powerhouse, the school leads in these areas:

- genomics of patient outcomes
- cancer survivorship
- digital health
- aging and gerontological health
- maternal and perinatal health

In 1954, **Pitt Nursing was one of the first schools of nursing to offer a PhD.** It continues to be a leader in the education of nurse scientists.

The School of Nursing is an engaged community member. In 2025 alone, its faculty and students partnered with neighbors and patient families through at least two dozen formal outreach programs, many of which are ongoing. For instance:

The **Allegheny County Breast Collaborative (ACBC)**, led by the School of Nursing, unites 10 community organizations dedicated to eliminating racial disparities in breast cancer survival across Allegheny County. Its partners represent health care systems, faith-based organizations, government agencies and philanthropic groups working collectively to ensure that Black women in the region receive education, advocacy and comprehensive support throughout the breast cancer care continuum. Since 2016, ACBC has been a trusted presence in the community. It has secured funding to expand its mission, ensuring that the breast cancer needs of the community continue to be met with evidence-based and culturally responsive approaches.

Class acts

A quicker pace

She's a runner, equestrian and a world traveler—you could say that **Macey Marks** enjoys life at a quicker pace. It's perhaps no surprise, then, that she's fast-tracking her nursing career through the School of Nursing's accelerated BSN (ABSN) program. The one-year curriculum is for motivated students who have already earned a bachelor's degree in another subject, and Marks holds both a bachelor's degree in chemistry and an MBA.

Before coming to Pitt, Marks taught English in Taiwan, then provided one-to-one support to elementary school students with autism as a paraprofessional in Westmoreland County, Pennsylvania. She realized she loved helping people and wanted to explore a new career path but

couldn't commit to another four years of school. When a friend told her about Pitt Nursing's "highly esteemed" ABSN program, it felt like a perfect fit.

"Pitt Nursing checked all the boxes I want for my life and my career," Marks says, "and I wanted to do something that feels meaningful."

Her favorite school days, Wednesdays and Fridays, are dedicated to clinical training. At UPMC Presbyterian, she has been learning how to take vitals confidently and conduct head-to-toe patient assessments. After graduating in summer 2026, she'd like to explore travel nursing to keep her love of adventure alive.

"The ABSN program is giving me such broad experience," Marks says. **"What's great about nursing is that you can always switch specialties, move up or move laterally. I like fluidity and doing something different every day, and nursing checks that box for me."**

**"I WANTED TO DO
SOMETHING THAT
FEELS MEANINGFUL."**

MACEY MARKS





"We are positioned to build boldly toward the future. We're expanding interprofessional partnerships, advancing research and deepening our commitment to student wellness and transformation in patient care delivery."

PHARMACY PIONEER

Amy Seybert strives for balance in all aspects of her life, with an impressive list of responsibilities to negotiate as the University of Pittsburgh School of Pharmacy dean—leading, educating and researching. She had a great role model in learning to juggle multiple roles. She says her grandmother balanced home, community and professional life and set an example for how to do it gracefully.

"I grew up seeing firsthand the value of hard work and ingenuity while seeing, and experiencing, the shining light of compassion that she sparked every day," she said. "Whether it was with her family, her community or her businesses, I saw how balance and perseverance define leadership."

Seybert leads a top-ranked school—9th in the nation in 2024, according to U.S. News & World Report. The school is also a top attracter of research revenue nationally. In 2024, it ranked 12th in federal funding and grants, seventh in total grants and fourth in nonfederal grants.

A passionate educator and scientist, Seybert conducts research focused on the use of simulation; she also studies how to improve clinical outcomes in cardiovascular disease and critical care, with an emphasis on medication safety. She is recognized as an international leader in simulation education in pharmacy and pioneered the use of human patient simulation to advance pharmacotherapy knowledge, clinical decision making and medication safety skills in health care professionals. Her clinical research in cardiovascular and critical care pharmacy practice and medication safety has led to substantial advances in patient care.

Seybert has amassed professional accolades. She was elected 2023 president of the Accreditation Council for Pharmacy Education Board of Directors. She's also received numerous awards and other recognitions, including the American Association of Colleges of Pharmacy Distinguished Teaching Scholar Award and fellowship in both the American College of Clinical Pharmacy and the American Society of Health-System Pharmacists.

Facts and figures

544

Total enrollment

65

Trainees

70

Faculty

No. 19 in National Institutes of Health funding among schools of pharmacy

(Blue Ridge Institute for Medical Research, 2025)

\$23.45 million research expenditures

92% PGY1 match rate

100% PGY2 match rate

22,988

patients provided with pharmacy care by Pitt Pharmacy faculty

23,407

drug-related problems addressed by Pitt Pharmacy faculty

4,720

patients provided with medication management by Pitt Pharmacy faculty

ACADEMIC PROGRAMS

Doctor of Pharmacy, PharmD

Master in Pharmaceutical Sciences, MS

Master in PharmacoAnalytics—
Pharmaceutical Outcomes Research, MS

Doctor of Philosophy in Pharmaceutical Sciences, PhD

ADVANCED STANDING DEGREE PROGRAMS

Doctor of Pharmacy to Master of Science in
Pharmaceutical Sciences, PharmD to MS

Doctor of Pharmacy to Master of Science in PharmacoAnalytics—
Pharmaceutical Outcomes Research, PharmD to MS

Doctor of Pharmacy to Doctorate in Pharmaceutical Sciences,
PharmD to PhD

Of note

The School of Pharmacy is particularly strong in these research areas:

- Drug discovery and development
- Translational research, pharmacogenomics, pharmacokinetics
- Implementation science, pharmacotherapy of various diseases (liver disease and metabolism, renal disease, cardiovascular outcomes)
- Medication safety outcomes research

Recognized for academic excellence: The School of Pharmacy's Doctor of Pharmacy (PharmD) program has been reaccruited by the Accreditation Council for Pharmacy Education (ACPE). **Having successfully met the 25 standards set forth by the ACPE, the school was granted an eight-year accreditation status with no monitoring.**

Pitt Pharmacy continues to lead nationally in the integration of educational technology into pharmacy education. Pitt's was the first pharmacy school in the country to incorporate human-patient simulation into a required core course for second-year students, setting the standard for immersive learning in pharmacy education. Ongoing research has demonstrated the effectiveness of simulation-based learning, and the school continues to invest in cutting-edge tools.

Pitt Pharmacy faculty partner with UPMC Pharmacy Ambulatory Services and Acute Care Services to advance ambulatory care pharmacy through high-value patient care, interprofessional collaboration, integrative education and innovative research.

Class acts

One conference, two awards

An Le, who is pursuing a PhD in the School of Pharmacy, won the Presidential Trainee Award as well as the Jason Morrow Award at the American Society for Clinical Pharmacology and Therapeutics Conference in June 2025 for his clinical pharmacology work focused on the female reproductive tract. He has a special interest in HIV patients and the LGBTQ+ population.

To speed up the drug-approval process, Le is supporting the development of a model (called a physiology-based pharmacokinetic model) of the female reproductive tract; he's working with researchers at the University of Buffalo. The model is designed to evaluate distribution of nonhormonal contraception and antiretroviral agents for HIV prevention. Le says the mathematical model predicts where a drug goes in the body and how it will function by using equations that represent the body's anatomical and physiological structures.

"We want to understand the physiology of different compartments, different organs within the female reproductive tract, to understand how drugs are distributed within this space so that we can understand how new drugs under development are distributed," he says.

"For the model we are developing, we use different drugs that are available on the market to characterize how they are distributed and compare our data against data obtained from clinical studies."

Such a model, he says, is "a hot topic at the moment. There's a major gap [in the field] and a lot of questions when it comes to the female reproductive tract because of its complexity."



"BEING CLOSE TO UPMC GIVES ME THE CHANCE TO WORK CLOSELY WITH PEOPLE WHO ARE PASSIONATE ABOUT PROVIDING CARE. THE COLLABORATIVE ENVIRONMENT HAS BEEN INCREDIBLE."

AN LE



“The convergence of disciplines here fosters entrepreneurial thinking and the development of new health technologies and interventions.”

AT THE HELM

Today, **Maureen Lichtveld**, an MD, MPH, is an internationally known environmental health scientist. Though she had decided to pursue a career in medicine by age 12, public health didn't come into focus until she served as the youngest and first female physician to work in the Amazon rainforest of Suriname, her small home country on South America's northeast coast.

There, Lichtveld learned that human health is inextricably linked to the environment in which people live and that solutions to health disparities require multipronged strategies. These convictions remain foundational to her work as dean, Jonas Salk Professor in Population Health, and professor of environmental and occupational health at the University of Pittsburgh School of Public Health.

Her research focuses on environmentally induced disease, community-engaged environmental epidemiology studies, disaster preparedness, climate and health, environmental health policy, public health systems, community resilience and One Health, a recognition that human, animal, plant and ecosystem health are interdependent.

Lichtveld chairs the Pennsylvania One Health Consortium, which unites academic, government and community partners to address current and emerging disease threats through research, education, policy development and community engagement. As dean, she oversees seven academic departments, 1,155 students, 155 faculty, 268 staff and a National Institutes of Health-funded research portfolio of approximately \$100 million.

Lichtveld is an elected member of the National Academy of Medicine. She provides technical expertise to several committees of the National Academies of Science, Engineering and Medicine, including the Division of Life Sciences, One Health Action Committee, Forum on Antimicrobial Resistance, and Grand Challenge in Climate and Health. Most recently, she led development of the health chapter of the academies' Independent Study on Potential Environmental Effects of Nuclear War.

Facts and figures

1,155

Total enrollment

155

Faculty

9,558

Total faculty/staff practice hours in 2024

62,000

Total student service hours from spring 2024 to spring 2025

No. 10 in NIH research funding for schools of public health.

(Blue Ridge Institute for Medical Research, 2025)

Pitt Public Health has partnered with the Allegheny County Health Department to establish the **Academic Public Health Department**. This relationship, anchored in a commitment to evidence-based public health, will enable both institutions to share resources across teaching, research, practice and service.

Launched in fall 2022, the Bachelor of Science in public health program enrolled its **largest class to date (234)** in 2025, bringing the total enrollment to 503.

The school has been selected to lead the **Pennsylvania One Health Consortium** to improve the health and well-being of humans, animals, plants and the environment, as ample scientific evidence demonstrates the interconnectedness of health across ecosystems. The consortium will serve as a transdisciplinary resource of research, education, policy and community engagement for the commonwealth.

DEGREES BY DEPARTMENT

Pitt Public Health offers the following Master of Science, Master of Public Health, Master of Health Administration and Doctor of Philosophy programs:

Behavioral and Community Health Sciences, MPH, PhD

Biostatistics and Health Data Science, MS, PhD

MS concentrations in Health Data Science or Statistical and Computational Genetics

Environmental and Occupational Health, MPH, MS, PhD

Epidemiology, MPH, MS, PhD

Health Policy and Management, MHA, MPH, MS, PhD

Human Genetics, MPH, MS, PhD

MS specialized programs in Genetic Counseling (GC) or Genome Bioinformatics

Infectious Diseases and Microbiology, MPH, MS, PhD

MPH concentrations in Laboratory Practice (PEL) or Community Practice (MIC)

Bachelor of Science in Public Health undergraduate program

Certificate programs—additional expertise in one of nine applied areas, completed during a degree program

Joint-degree programs—Anthropology, Business, Law, Medicine, Public and International Affairs, and Social Work

Multidisciplinary Master of Public Health—doctoral-level professionals blend clinical and professional training with population-based approaches to improving health

Accelerated Bachelor/Master Program—eligible Pitt undergrads can earn both degrees in five years

Class acts

Explorations

The Guaranteed Admission Program, or GAP, allows qualified Pitt undergraduates to secure a future seat in select graduate or professional programs before even starting college.

Evan Trump entered college with a guaranteed spot in graduate school—giving him the freedom to explore academic as well as other interests, including the Appalachian Trail.

He started at Pitt as a biology major, unsure whether graduate school was the right path—but the academic safety net gave him confidence to shift directions and dive into data science. After graduation, he took a gap year to hike the trail, traversing the 2,200-mile route from Georgia to Maine over five months.

Trump eventually pivoted from biology to environmental engineering, graduating from Pitt's Swanson School of Engineering

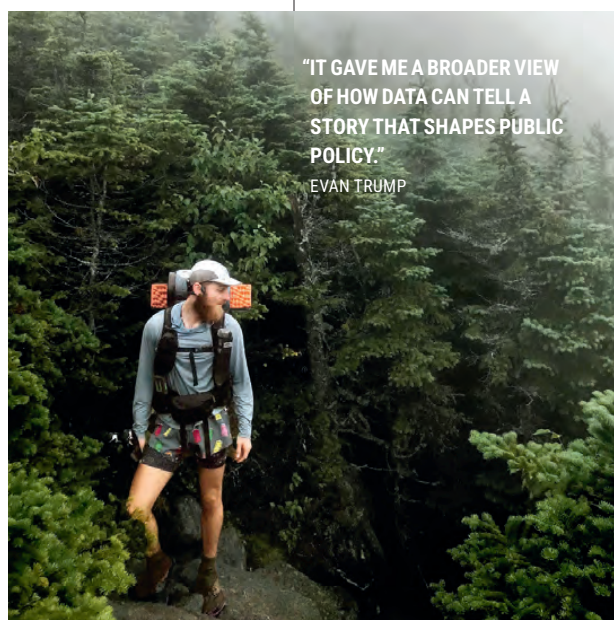
in late 2022. His time in the lab deepened his appreciation for research, yet it was the data—more than the pipetting—that captured his interest.

"I realized that I really liked the stage of analysis—when you have the numbers in front of you, and you can figure out what they're saying," he explains. "That's what led me to biostatistics [at the School of Public Health]."

He's interned with Thermo Fisher Scientific, supporting cancer drug and vaccine development by analyzing datasets in the lab. He's also worked with the school's Jeanine Buchanich, vice dean and associate professor of biostatistics and health data science, on a project comparing Allegheny County mortality rates to similarly sized counties across the United States. "That work was about public health at the population level. It gave me a broader view of how data can tell a story that shapes public policy."

For him, the journey has never been linear—but it's always been grounded.

"I'm open to whatever comes next," he says.





CHAMPIONS AND PARTNERS

Some of the world's brightest and most driven are here at the University of Pittsburgh, working to advance health from every angle. Our healers, scientists and students team up so that good ideas do actual good. Join us.

Catalyst

From thousands of dental, vision and hearing screenings, to thousands of prescriptions filled, to one-on-one support for seniors in need, **volunteers from the health sciences at Pitt contribute untold hours, certainly tens of thousands, each year to our communities.**

Through our research, education, community service and clinical care missions, Pitt's six health science schools champion the health and well-being of millions. Our work is also good for the region, Pennsylvania and the nation economically.

\$982 million

in health sciences research expenditures at Pitt. That's nearly **82%** of the University's total research expenditures of **\$1.2 billion**.

Yet, "Pitt's spending of research dollars represents only the tip of the iceberg as a growing ecosystem of companies in the biomedical, advanced manufacturing and bioscience industries generates millions in additional economic impact annually throughout Pennsylvania as a result of Pitt's research footprint," according to the economic impact consultancy Tripp Umbach.

Top 20 in licensing activity among U.S. universities

Top 15 in issued U.S. patents and deals

Top 20 in invention disclosures and startups

In 2025, Pitt Health Sciences accounted for 83% of University-wide innovation; that translates to:

338 U.S. and international patent applications filed

343 invention disclosures

126 licenses/options/deals

82 U.S.-issued patents

14 startups

Sources: NAI 2024 Top 100 Worldwide Universities Granted U.S. Utility Patents; AUTM 2024 Licensing Activity Survey; Pitt Innovation Institute 2025 data; Tripp Umbach 2023 Pitt Economic and Community Impact Report.



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