

FALL/WINTER 2019

UNIVERSITY OF PITTSBURGH

FACETS

SCHOOL OF HEALTH AND REHABILITATION SCIENCES



ANNIVERSARY

Forward. Thinking. A look at SHRS at 50.

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FALL/WINTER 2019



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PittSHRS

School of Health and Rehabilitation Sciences



Greetings,

I am honored to write this column for the School of Health and Rehabilitation Sciences (SHRS) 50th anniversary issue of FACETS magazine. We have so much to celebrate!

Looking back, SHRS has had two wonderful “eras of leadership”: namely, the Pascasio/Martin era and the Brubaker era. Back to back, they have taken SHRP/SHRS to heights that I don’t believe anyone would have imagined back in 1969 when our journey began.

In the Pascasio/Martin era, Founding Dean Anne Pascasio initially built a school around one profession, the physiatrics program that originated at D.T. Watson. D.T. Watson’s program was one of the charter physical therapy programs in the country—one of some 20 original programs. Through Dr. Pascasio’s years of leadership, she added numerous other health profession programs to form the School of Health Related Professions (SHRP). SHRP was truly a product of the Allied Health movement of the 1960s upon which was built the foundation for our excellent educational programs. During his tenure, Dean Jerome Martin continued the progress set in motion by Dr. Pascasio.

Enter the Brubaker era. Dr. Thomas Detre, then Pitt’s senior vice chancellor for the Health Sciences, recruited Cliff Brubaker in 1990 to serve as dean. The school’s transformation into a complete academic powerhouse was nothing short of amazing, beginning with the name change to the School of Health and Rehabilitation Sciences. Scholarly productivity grew by leaps and bounds during his 24-year tenure. In addition, academic programs grew in number and in size, all while improving our reputation and rankings, arguably without peer.

How was this possible? Why did SHRS and Pitt succeed in offering both excellent educational programs as well as prodigious scholarly productivity? Observing this growth from within, I attribute it to two things. First, Dean Brubaker’s vision instilled an expectation that matched all successful research-based institutions—namely, that the currency by which you measure your scholarly productivity is through procurement of peer-reviewed grants and publishing in peer-reviewed literature. And second, Pitt created an environment, particularly for its Schools of the Health Sciences, where the budgetary structure allows for entrepreneurship which Brubaker adopted and utilized for the school’s advantage throughout his tenure.

Thanks to my predecessors, I, as dean in my fifth year, inherited a school with many strengths, and few weaknesses. I also recognize that we face some legitimate challenges. Concerning the latter, my leadership team and I are certainly concerned by our growing student indebtedness, which is no doubt linked to tuition levels that oftentimes rank us higher than our private school peers and will necessitate greater efficiencies and cost-effectiveness in our educational delivery.

We are fortunate that the leadership in SHRS sees such challenges as opportunities to demonstrate our collective innovativeness in educational delivery. This is especially evident as we boldly move into the arena of distance education. Watching our team put together our first of many planned distance offerings to become available starting in Spring 2020, I am confident that future challenges will be met with the same level of innovation and creativity as displayed in our first 50 years, and that SHRS will continue to be a leader in transformational change. When my term as SHRS dean ends, I hope to leave a legacy of responsible stewardship of the many accomplishments realized by those who served before me on behalf of our past, present and future students.

Anthony Delitto
Professor and Dean

giving



Happy Anniversary, SHRS!

For many who graduated from the School of Health Related Professions' first classes, today's SHRS looks nothing like the school they attended. We moved out of Pennsylvania Hall into a new home base at Forbes Tower, expanded our classroom and laboratory footprint to include places like Bakery Square, the South Side, U-PARC, McKee Place and Bridgeside Point, and consistently grew our professional offerings in response to the growing needs in the health care marketplace. Today, we offer degree programs in 13 health science professions from A (Athletic Training) to RT (Rehabilitation Technology) with a multitude in between. A lot has happened over the last 50 years and we certainly have a lot to celebrate.

Throughout the 2019–2020 academic year, SHRS is celebrating 50 years of educational excellence, professional distinction and innovative research and development. The year-long celebration will culminate with our anniversary gala weekend on May 8–9 during which we will confer our Distinguished Alumni, Rising Star and Humanitarian Awards; hold faculty-led panels on today's hot health care topics; host tours of our new educational and research facilities; and enjoy dinner, dancing and reconnecting with classmates, former faculty, University leadership and special guests at the Anniversary Gala. We hope you will join us for this momentous milestone! Detailed information about the weekend's full schedule of events, hotel accommodations, gala tickets, event sponsorships and other ways you can be involved in the celebration can be found on the 50th Anniversary website at 50.SHRS.Pitt.edu.

As we kick off the fanfare, we truly need your help to make our Anniversary year a success.

To commemorate 50 years of SHRS, please consider making an anniversary gift to the SHRS Alumni Scholarship Fund. This alumni-driven endowed scholarship supports students from across the school every year. As the endowment grows, so too does our ability to provide more funding to students pursuing careers in our varied rehabilitation professions. You may also support a specific department, program or other fund in honor of our anniversary milestone as well. Information on making an anniversary contribution can be found on the website.

If you own a business or private practice, please also consider becoming an anniversary sponsor! Sponsorship provides a number of benefits including gala tickets, recognition in the program and prime logo placement on SHRS communications, website and anniversary promotion. Please visit the anniversary website (50.SHRS.Pitt.edu) to learn more about how you can promote your business through the different sponsorship opportunities.

And most importantly, mark your calendars, call your travel agents, pack your suitcases and set your GPS coordinates for Pittsburgh!

The achievements and growth over the last five decades would never have been possible without the tremendous contributions of expertise, time and financial support from every corner of our extended community. We look forward to celebrating those contributions with you in May! Happy Anniversary!

Greta Daniels
Director of Development

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Prior to the distribution of this edition of FACETS magazine, Greta Daniels accepted a new position offering exciting opportunities to grow professionally. Many of you had the pleasure of interacting with Greta at various events or in personal visits as she fulfilled her responsibilities here at SHRS. We will miss her quick smile and sense of humor and wish her all the best in her future endeavors.



perspective

Perspective is written by Patty Kummick, FACETS executive editor and SHRS executive director of Internal and External Relations. This column serves to address topics relating to our students, faculty, staff, the school, and local and global communities.

As we were preparing this issue of *FACETS*, I realized that many of the articles provide a retrospective view in this SHRS anniversary year. They highlight where SHRS and our departments and programs originated, where we've been recently and where we are now. Few articles delved into the future, and if they did, the perspective was from a few short years out. With technology and medical advances developing so quickly, it taxes the brain to consider what life will be like in 20, 30, 50 years ... what health and wellness and the provision of care will look like decades from now.

So I decided to conduct a quick, totally unscientific Google search for predictions on health and wellness 50 years from now. It was fascinating ... and enlightening ... and scary ... and thought-provoking ... and generally positive!

The visionaries talked about patients and consumers expecting proactive care, personalized medicine, and personalized nutrition and fitness; an increase in wearables—most likely disposable wearables; virtual health and medical appointments; care on demand; consumer health data as a commodity; human performance enhancement through connected devices; implantable sensors to continuously monitor our health status; and personal digital assistants to manage and coordinate care, coverage, prescriptions and more. In other words, prognosticators talked a lot about a major proliferation of technology, data and artificial intelligence in the areas of health and wellness. They talked about robots being the care providers.

Pretty heavy stuff to think about if you're a clinician, data expert, researcher or academician. And it's almost overwhelming to think about if you're a student. What will your work life involve? How will you translate your skills in this high-tech, possibly low-touch world?

And that got me thinking about what academics might look like. And the provision of clinical services. And research methods. Will medical procedures still be performed in hospitals? Will hospitals still have beds? Will we order health and wellness services like we do food delivery? Will there be a need to visit a doctor's office or clinic? Will we go about our day-to-day lives with implantable sensors to continuously monitor our health status? Will SHRS as an educational entity even exist in bricks and mortar?

At SHRS, we spend a lot of time thinking about and planning for the future. The future guides our research ... always looking for a better way. It shapes our teaching methods ... flipping classrooms, interacting through "smart" technology. It expands our reach and scope of influence ... especially as we embark on offering degree programs through distance learning and virtual interactions. Forward thinking is what has brought SHRS to this point in time where we can celebrate 50 years with great pride.

I hope I've stirred your imagination about what the future holds for all of us as trailblazers—as providers and consumers of health, rehabilitation and wellness services. I'd love to ponder the topic further but I must get up from my computer now. My wearable just reminded me it's time to take a stroll!

To comment or share your insights on this column, please contact Patty Kummick at pkummick@pitt.edu, 412-383-6548, SHRS, 4054 Forbes Tower, Pittsburgh, PA 15260.



Scott

Burgin

Pascasio, Anne

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PITT

University of Pittsburgh
Department of News and Publications

FOR IMMEDIATE RELEASE

PITT DEAN APPOINTED TO ACCREDITATION COMMISSION

PITTSBURGH, November 10--Dr. Anne Pascasio, dean of the School of Health Related Professions at the University of Pittsburgh, has been appointed to the Commission for the Study of Accreditation of Selected Health Educational Programs.

The Commission is a cooperative study conducted under the joint auspices of the Council of Medical Education of the American Medical Association, the Association of Schools of Allied Health Professions, and the National Commission on Accrediting.

The twelve-member commission will study requirements for entrance into the various health professions, accreditation of education programs in the health professions and the licensure of persons in these specific health fields.

Dr. Pascasio received her undergraduate and master's degrees from the University of Pittsburgh. Certified as a physical therapist by the D.T. Watson School of Physical Therapy, she holds a Ph.D. in Higher Education from Pitt. A faculty and staff member of the University since 1967, Dr. Pascasio currently holds a joint appointment as professor of Health Related Professions.

Prior to joining Pitt, Dr. Pascasio was a member of the Interprofessional Task Force on Continuing Education for the Health Professions in the Office of Research in Medical Education at the University of Illinois Medical Center in Chicago, an instructor at the D.T. Watson School of Physiatrics in Leetsdale, Pa., consultant to the Division of Education of the American Physical Therapy Association in New York City, chief physical therapist at the Hospital of the University of Pennsylvania in Philadelphia, ...
Graduate School of Medicine and a staff physical therapist at C

A member of numerous professional and honorary societies and ...
Dr. Pascasio has participated on the Special Committee to evaluate ...
Cerebral Palsy Association of the Pittsburgh District and is a ...
Advisory Council of the Manchester Health Center Board of Pitt
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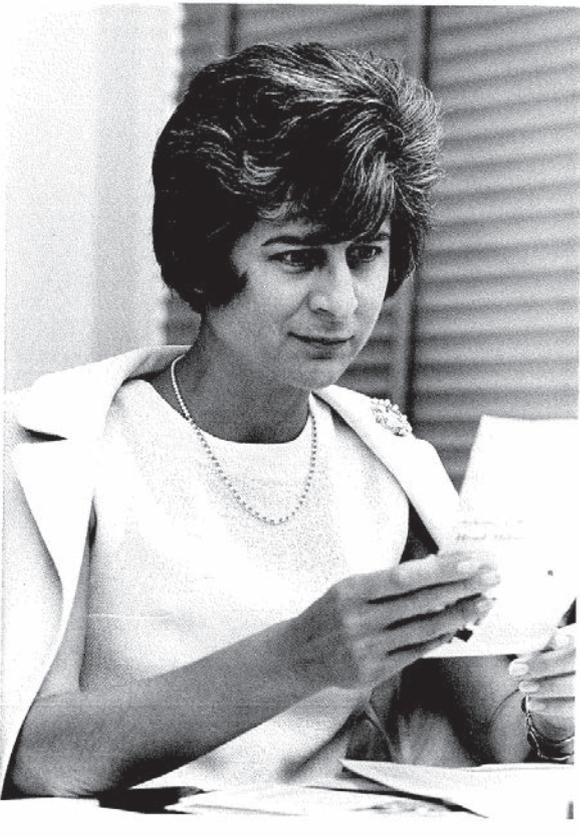
ANNIVERSARY

“STANDING ON THE SHOULDERS OF GIANTS.”

“When someone said it was the 50th anniversary of SHRS, I was sort of shocked. It’s a landmark—a huge landmark—and it’s exciting. Especially when you look at our trajectory, which has been on a very steep curve upward. It’s also a scary thing for me because I’m the dean who has taken over when the School is on this very steep trajectory and some would say it has nothing to do but go down. Obviously, my objective is to keep that trajectory going and even make it a little steeper.”

— Anthony Delitto, dean, School of Health and Rehabilitation Sciences, 2015–present

In the course of 50 years, what started as the School of Health Related Professions has evolved from a handful of faculty members teaching four programs to the prestigious School of Health and Rehabilitation Sciences that we know today. The growth in programs and reputation can be attributed to the past and present deans of the School. They were distinctively different leaders, all with unique talents to guide the School through the challenges of their day and leave a lasting imprint on the lives of faculty, students and patients they encountered. Here are their recollections of the School they knew.



Anne Pascasio, founding dean, School of Health Related Professions, 1969–1983:

“Before it became a school, it had to be decided by Pitt that there would be such a school because there never had been. We put a plan together and took it before the Provost’s Advisory Committee on Undergraduate Education. At first there was difficulty with some of the committee in deciding whether or not they would approve the school because who could believe that anyone like a medical technologist or a clinical dietitian or a physical therapist like me would have the credentials to become faculty in such a school?”

“I knew that there were at least three physicians who wanted the job of dean. It wasn’t that I didn’t like the physicians, but I was interested in the fact that Pitt would appoint a non-physician as dean when other universities had gone the physician route for schools like that.

“The biggest thing that the University could have done for me was to have me work with Francis Sargent Cheever, who was vice chancellor of the Schools of the Health Professions at the time. He was a believer. He trusted his people. If he thought you knew what you were doing, he stood behind you every inch of the way. I was very grateful for him. We probably never would have gotten anything without him.

“Our biggest challenge was growing the School and growing it in a way that would be fitting for the outside world before the students who were going to come in. That was a challenge, no question about it. The other part of the challenge was having the rest of the University look at us as being on par with them.

“We started with physical therapy, medical technology and child development being departments. We opened what we called a division of health-related professions. We had plans for health records administration, clinical dietetics and nutrition and occupational therapy.

“We built relationships with CCAC—the Community College of Allegheny County—to make it possible for their students to come to us.

“I went and sat down with them and said, ‘We need your help. Would you mind if we sent you a certificate program in childcare and you turned it into an associate degree? We can then accept those students back into a bachelor’s degree, which we will start. There’s already a master’s, so we will have what is euphemistically called a career ladder.’

“We did the same with respiratory therapy. Walt Stoy was a paramedic at the time. He came to me and said he would like to get at least an associate degree and asked what I could do to help him. I called CCAC. By that time, we knew each other very well, the community college and the School of Health Related Professions.

“They began a program for EMTs. Walt took it, came to us and said, ‘I’m back. What can you do for us now?’ That was when we really began to plan a program at the upper division level to help respiratory therapists and others like emergency medical technicians become acquainted with how to teach or how to administer so that they could be the leader of their groups in their fields.

“We also developed something called a LEAD program. L for leadership, E for education, A for administration, and D for development. That was for people to become educators or administrators within their fields.

“I was privileged to be the first dean, and I’ve been fascinated with the way the School has grown.

“We began as the University’s smallest School. It’s now one of the largest. The programs have developed like mad. We began with a little bit of research—\$500 from a research development fund that I started. By the time I left the School at the end of 14 years, physical therapy was doing some good research.

“I look at SHRS with a great deal of interest and a great deal of pride because I think it’s making quite an impact.”





Jerome L. Martin, dean, School of Health Related Professions, 1983–1989:

“Off the top, I want to congratulate Anne. She was the person with the vision who started the School and carried it through in a very difficult environment. She was in the minority as a female dean on campus, and it wasn’t easy, but she stayed the course and set the stage for what the School is today. Anne set the bar pretty high.

“The evolution of the professions paralleled the evolution of our School. Entry into physical therapy as a practitioner, for example, went to the master’s degree so we developed advanced master’s programs. That was my focus while I was dean—developing unique specialties for advanced masters. When the master’s degree became the requirement for entry into a profession, we started to think about going beyond that.

“The School was evolving during those first two decades from ’69, to the late ’80s, and we had four or five academic disciplines. We were newbies in the university setting. That posed a lot of problems because there was a dearth of faculty that had appropriate degrees. Most programs like ours were hospital-based and the faculty were clinicians. They typically did not even have master’s degrees, and certainly, there weren’t many people with doctoral degrees. If you know about academia, the starting point is a PhD if you want to teach in a university, so we realized we had to grow our own faculty and make sure they went to get their advanced degrees.

“People like Sue Whitney and Jessie VanSwearingen completed their PhDs while they were working full time in the School, and so did I. We tried to recruit other faculty who, if they weren’t beyond the master’s, would make a commitment to complete their PhDs.

“Recruiting students wasn’t a problem because allied health, as it was called then, or health related professions, was emerging as a real focus in the delivery of rehabilitation services.

However, it was hard for us to get money to do the kinds of things we needed, because we were so young.

“We had to fight for every nickel. We didn’t have the resources that other schools had. We had no alumni, we had no development function at that point, so it was pretty bare bones, but to Anne’s credit, every year she fought the good fight for the budget. You could tell when budget time was coming around. She got a haircut and dressed up and she went to war with the people down the hill in terms of the budget.

“Once we hit the plateau of having 3,000 alumni, we started to bring in money.

“Research was just beginning to emerge in the School. I put the first lab the School ever had in Pennsylvania Hall, and that was in the mid ’80s. It was meager, trust me, it was very meager. It was built for Ray Burdett, and we thought that would help kickstart the whole research agenda, but we had no space, we had no equipment.

“We started to plant the seed that the School needed to develop a research agenda. We tried to make people aware that research is what they needed to do in academia. Back then it was just all the basic sciences. We had people doing research in neuroscience and we had people doing research in biomechanics, but we did not have anybody doing research in validation of clinical procedures whatsoever.

“When Dean Brubaker came, there was a real change in support for this School and the advances of the whole research agenda. He was able to recruit faculty who already had research agendas that brought research to the University.

“What we had in the School during my time was a real comradery. People worked together. The important thing was our students; we recruited a lot of good students to Pitt. They know we cared about them. They performed and they went out into the world. We’ve had a lot of very successful alumni, very successful kids. If somebody asked me what I was most proud of, I would say our students.”



Cliff Brubaker, dean, School of Health and Rehabilitation Sciences, 1991–2015:

“The first thing I did as dean was set the wheels in motion to change our name. I liked the statement of health and rehabilitation sciences as being our core focus. I don’t think that you can be in an academic environment and try to improve on some element without considering a scientific endeavor.

“From the beginning, my focus was very much on science and research, to develop a research environment where one didn’t really exist.

“I asked for four new positions and got them. I brought some people with me from the University of Virginia, one of them being Dave Brienza (current SHRS associate dean of Technology and Innovation and Department of Rehabilitation Science and Technology professor).

“I had left behind a very large grant at Virginia, which was going to be up for renewal. It was for \$15 or \$18 million or something like that. At Virginia, we had a lot of horsepower—people we could call on to enrich the kind of environment that we needed. We didn’t have that here. As an alternative, I met with somebody who worked at Westinghouse here and I discussed with them the possibility of them joining us in this research effort. Well, that allowed us to propose things that nobody else could do! We blew everybody’s doors off and we got the grant that I had held at Virginia.

“It was quite an opportunity to bring a new focus and improve wheelchairs, improve all kinds of things.

“That was what we set out to do. We were looking at people with disabilities. What can we do to make life better for them? Of course, this involves things like seating. Dave Brienza is still doing that. He’s probably the leading person in the world working on pressure relief seating so people don’t get pressure ulcers.

“We acquired a lot of funding over the years. For example, toward the end of my time at Pitt, we had contracts with each of the military services.

“There were an awful lot of people involved in making our School what it is now. I sort of directed traffic through that process and established the direction and schedule. When I stepped down as dean, there was some \$21 million in research and we were doing well. We were ranked very high in everything that we did.

“There’s a very clear metric that I can share with you from an organization named College Factual. Their reason for being is to investigate academic programs and rate them at various levels. They declared the School of Health and Rehabilitation Sciences to be the best place in the United States to study health professions.

“That was quite an endorsement.

“During my 25 years as dean, we went from Pennsylvania Hall, one of the oldest buildings on campus, to many floors in the then-new Forbes Tower, and now we have space in Bridgeside Point and Bakery Square. We have more than doubled our space, so that’s a big deal. The recent move allowed us to collaborate with other people more effectively. It’s a real boon to us for the kind of things we wanted to do.

“For the students, I think it was better because the School had more resources. We had better facilities. We increased our faculty, bringing in more talented and dedicated people. And we broadened the spectrum of what we did.

“We always tried to help people who needed help, people with disabilities, but then we also began to have the opportunity to focus on athletes, sometimes elite athletes as well as people who were very healthy. We looked at how to make them better; to give them the opportunity to exceed where they were. We had a continuum from people who were immobile, not able to do much of anything, to people who were very good athletes.

“That was our focus, and we worked hard at it. It was gratifying. I think that we were successful, and I felt good about it. We had an excellent faculty, and I’m sure that we still do have an excellent faculty. That’s what it takes.

“We did it collectively. I had thoughts and ideas. I knew what I wanted to accomplish. I thought if you didn’t want to be the best, then you probably shouldn’t be there. I did hope that we would be able to sit and one day say that we were the top school, and I think we were.”





Anthony Delitto, dean, School of Health and Rehabilitation Sciences, 2015–present:

“The perfect storm, in my mind, happened with Dean Brubaker’s vision and the scholarly productivity, which really put us on the map.

“To the University of Pittsburgh, the thing that really moved us forward was our ability to claim that we were scholars, and that our scholarly productivity was on par with any school like ours in the country, and on par with most of the health science schools.

“We were able to grow, and we grew for a reason. We grew because we had a leader with vision. We also had leadership in other areas of the University, namely the Provost’s Office, that realized that in order to grow you need resources. In the late 1990s, the provost introduced the tuition incentive program. As we grew our programs and enrollment, we actually had tuition money that came back to us, to be reinvested in the School. Investing that money wisely and bringing people on board who could continue to contribute to the mission—the scholarly mission or the educational mission—that was the formula for success for us.

“We are a group of health professionals that really focuses our time and energy on impactful research, trying to either prevent disability or trying to maximize function of people who have impairments. Our vision is for a barrier-free world. When we can take a person who has a lot of impairments and, either through technology or assistive devices, get that person to a point where they can work and they can function in life, they are not disabled. That’s highly impactful work.

“One of the most important things we must do in the next few years is couple our own knowledge with interprofessionalism—that is the thing of the future. We really need to learn from other professions and know what they are doing if we expect to take care of patients in the most efficient manner.

“We have identified six priority areas that cut across all of the different programs. They don’t do anything to minimize the contributions of the individual professions; what they do, though, is show our strength. Every time we collaborate, we get stronger.

“We need interprofessionalism in order to move forward in a way that affects not only how we teach in the classroom, but also how we practice. If we show the collaboration and the synergies of our School as well as our accomplishments, the reputations of individual programs will continue to rise along with the reputation of SHRS.

“It is staggering to think how many lives SHRS has changed over the years.

“First of all, take our graduates, who are there every day in the trenches changing lives of people every day in the rehab world as well as in the health world. And then add

to that the lives we change through the dissemination of our research. Somebody reads a paper of some innovation that we’ve introduced, and they begin to practice that way. Then look at our patents, especially the patents that come out of Rehabilitation Science and Technology—the way we’ve improved the whole mobility area and the work we’ve done in seating and in pressure ulcer prevention and management.

“There’s a phenomenal ripple effect. It’s a tidal wave of an effect, actually, not just a ripple. So, I couldn’t put a number on how many lives we have changed, but I think that number’s quite high.

“I have never taken for granted the fact that this is a team and we are having this impact not because of any one leader. We’re having this impact because we’ve had a team of people that have had a shared vision to move the School forward.

“I think it was Sir Isaac Newton who said, ‘If I have seen further than others, it is by standing upon the shoulders of giants.’

“At SHRS we have had many strong shoulders to stand on. Anne had the vision. She had the tenacity and she overcame the barriers. We can’t underestimate the barriers she overcame.

“Her work was carried on by Dean Martin and then Dean Brubaker, who saw the need for scholarship.

“Now I’m standing on his shoulders. I don’t have to do what Anne did. I don’t have to convince people in this institution that our School is important. They know it is.

“I don’t have to establish the scholarship of our School like Cliff did, because it’s already been established.

“Some might ask what do I need to do? I think what I need to do is manage the challenges of the future, some of which are significant, like our costs and our student indebtedness.

“I think it’s possible to find ways to make education more affordable so we can actually reverse the trend of increased tuition. It’s a challenge but also an opportunity to take the educational technology that we’re working on, like for our distance education programs, and to use the data that we already have now to make education more efficient.

“Can we get our students out of here quicker so they’re not paying as much, and can we come up with ways to make tuition less? Can we do that and still exist like we do, with the resources that we have, so that we can continue to invest in the School and continue to be good?

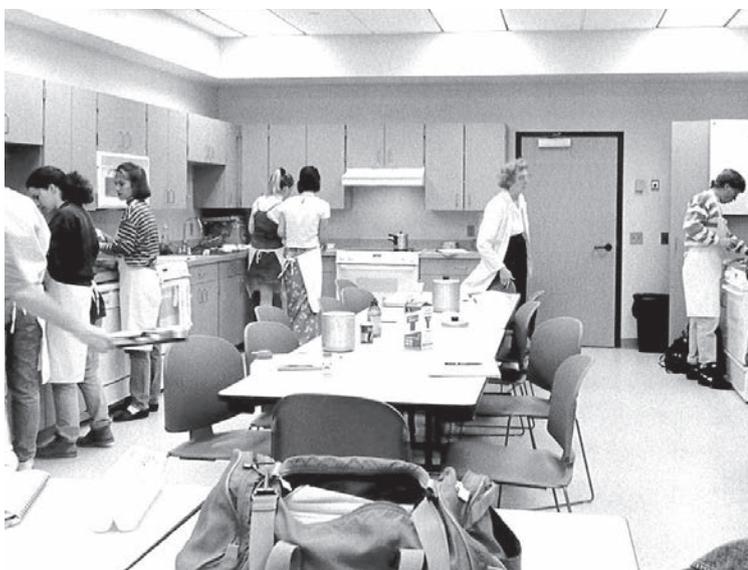
“The answer to all those questions is yes, we believe we can do that. And I think if we do those kinds of things with the challenge of indebtedness and some of the other challenges that are out there, I think we can continue this trajectory. We can continue it—even make it a little steeper.

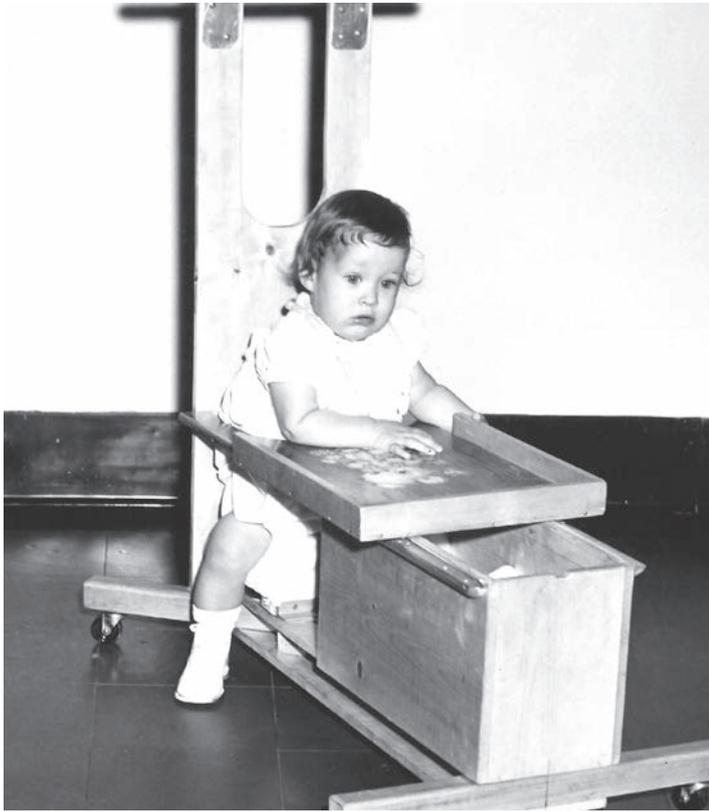
“And continue to change lives.”



Recognize some of these faces and events?

Email pkummick@pitt.edu and tell us who you remember.
Find more at photos online at www.50.shrs.pitt.edu





A LEGACY OF EXCELLENCE.

More than 90 years ago on an idyllic estate in Sewickley, Pa., the foundation was laid for the most prominent and patient-focused physical therapy program in the country. The D.T. Watson School of Physiatrics started as a training ground for physical therapists who worked with children with disabilities. In time it evolved into Pitt’s Department of Physical Therapy (PT), an acclaimed, research-based program that continues to raise the standard for patient care.

Since those early days, our faculty have been recognized for their contributions to physical therapy education, research, practice and leadership.

During the polio epidemic of the 1950s, physical therapists from the D.T. Watson School (DTW) collaborated with Dr. Jonas Salk on cutting-edge research and successfully contributed to clinical trials that forever changed the trajectory of physical therapy training.

DTW’s medical director, Dr. Jessie Wright, developed the rocking bed for children and adults with polio. The bed saved lives by reducing pressure sores and helped individuals breathe easier without the use of an iron lung.

In 1969, after years of affiliation with the University of Pittsburgh School of Medicine, the physical therapy program at DTW was officially transferred to Pitt’s new School of Health Related Professions. The legacy of excellence continued.

Taking the lead in clinical education.

Physical therapy education was changed forever in the mid-1970s when adjunct faculty Richard Bowling, Richard Erhard and Keith Erb introduced the teaching of joint mobilization into Pitt’s entry-level PT program. It was among the first PT programs to do so. SHRS Dean and PT Professor Anthony Delitto worked with Bowling and Erhard (affectionately known as “Rick and Dick”) to develop and validate a treatment-based classification system for the management of low back pain. This approach revolutionized the treatment of low back pain by matching treatment (exercise, manual therapy/joint mobilization, stabilization and traction) to the patient’s presentation. This model of practice has been adopted worldwide, not only for the treatment of back pain, but for many other conditions treated by physical therapists and has widely influenced the way that physical therapy has been taught.

In the 1980s, Professor Susan Whitney was one of the first in the country to train students in a groundbreaking new therapy that improves the quality of life for patients who experience vertigo, dizziness and other balance disorders. “Using evidence from events such as concussion or an inner ear problem, we were able to develop certain exercises that effectively eliminate many symptoms that reduce a person’s quality of life,” notes Whitney. Today, vestibular rehabilitation training is incorporated into physical therapy education programs worldwide.

At the annual Vestibular Rehabilitation: An Advanced Course and Update, PT faculty and researchers from around the world use case-based studies to discuss ways to elevate their practices. Since it began in 2007, this course has helped hundreds of physical therapists, occupational therapists, physicians, nurses, physician assistants and audiologists improve care for patients with balance disorders.

Creating evidence that changes practice.

Pitt's PT Department has amassed a substantial body of research ranging from valuable questionnaires and outcome measurement tools to definitive protocols that have impacted clinical practice.

Professor and PT Department Chair James Irrgang collaborated with the members of the International Knee Documentation Committee (IKDC) to lead the development and validation of the IKDC Subjective Knee Form. This is the most widely used knee-related patient-reported outcome measurement to determine symptoms, function and sports activity for individuals with an acute or chronic knee injury.

In 2015, Delitto was awarded a \$13 million grant from the Patient-Centered Outcomes Research Institute (PCORI), one of the first of its kind, to investigate innovative ways for physical therapists to partner with primary care providers to deliver psychologically informed physical therapy to patients with acute low back pain.

PT Professor G. Kelley Fitzgerald advanced the care of people with knee osteoarthritis (OA) when he began to investigate patient-reported complaints of knee instability in 2000. Thanks to his research, the field of physical therapy began to directly address instability in patients with OA in addition to pain, strength and joint mobility.

Fitzgerald, along with PT faculty members Allyn Bove and Christopher Bise, and other colleagues were awarded the Academy of Orthopaedic Physical Therapy of the APTA's 2019 Steven J. Rose Award for Excellence in Orthopaedic Physical Therapy Research for a new booster delivery approach for PT in knee OA rehabilitation. "We found that periodic face-to-face 'booster' therapy sessions with patients was both clinically beneficial and cost effective," says Fitzgerald. "We are now implementing both the rehabilitation program and the booster session approach within the Centers for Rehab Services physical therapy clinics of the UPMC Health System. We also have plans to study the use of telerehabilitation as a mechanism for improving the booster session delivery approach."

Bringing PT into the community.

"Older adults fear losing their independence more so than death," reports Professor Jennifer Brach. To alleviate that fear, Brach created a 12-week-long group exercise program called "On the Move." More than 400 participants from senior centers, independent living facilities and senior housing throughout the Pittsburgh area realized gains in mobility after completing the program. They were also less likely to be hospitalized during the following year than older adults who participated in a standard seated exercise program.

"It is clear that we have a history of changing the course of clinical practice," says Irrgang. "Our goal is to continue to produce the very best clinicians and to implement best practices for the benefit of our patients."

PAYING IT FORWARD

By David G. Greathouse, DTW '69

"The PT faculty at DTW were all seasoned clinicians and excellent instructors both in the didactic and lab settings. They were also exemplary role models. We were fortunate to have a number of local clinicians who gave lectures and labs in their specialty areas. Some physicians also provided lectures on pathology in these areas which greatly supplemented the PT lectures.

"After joining the military and earning my master's in PT and PhD in Anatomy, I gladly became a clinical instructor during my assignments at Walter Reed National Military Medical Center, Irwin Army Community Hospital at Fort Riley and Brooke Army Medical Center at Fort Sam Houston.

"I have always valued being a DTW graduate, and also how the University of Pittsburgh Physical Therapy program has continued to recognize the DTW graduates as being a part of their program."



Dr. Greathouse was a member of the last graduating class from D.T. Watson. He served in the United States Army from 1970–1996, attaining the rank of Colonel, and was the Chief Army Physical Therapist (1993) and Army Medical Specialist Corps Chief (1993–1996) in the Office of the Army Surgeon General. Currently he is the Director of Clinical Electrophysiological Services, Texas Physical Therapy Specialists in New Braunfels, Texas, a member of the International Editorial Review Board of the Journal of Orthopaedic & Sports Physical Therapy and a member of the PT Panel, Commission on Accreditation in Physical Therapy Education. Dr. Greathouse is a Catherine Worthingham Fellow of the APTA.

Over the years, four graduates of the DTW and Pitt Physical Therapy programs have been elected president of the American Physical Therapy Association (APTA). They include Mary Elizabeth Kolb, Robert Richardson, Jan Richardson and Paul Rockar. In addition, six current faculty members, namely Anthony Delitto, Kelley Fitzgerald, James Irrgang, Jessie VanSwearingen, Susan Whitney and Jennifer Brach, as well as emeritus faculty Anne Pascasio and Rosemary Scully, have been named Catherine Worthingham Fellows, the highest membership honor bestowed by the APTA. Dr. Delitto received the highest honor of the professional association in 2008 when he was named the Mary McMillan Lecturer.

But according to Assistant Professor Judith L. Dodd, Department of Sports Medicine and Nutrition (SMN), the modern profession of clinical dietetics really began in Cleveland, Ohio, in 1917 when a group of dedicated women met to discuss ways to be of more service to the government during World War I.

“Feeding the troops was an issue, as was caring for the wounded,” says Dodd. “At the time, members of the Home Economics Association included individuals who called themselves ‘dietitians.’ They were focused on more than just cooking—they understood there was an important link between food and nutrition and health.”

The American Dietetic Association, now known as the Academy of Nutrition and Dietetics (AND), was born.

Quickly, dietitians from Pennsylvania picked up the torch and established their own associations in Philadelphia, Scranton and Pittsburgh. Under the direction of Irene Willson, a dietitian at Shadyside Hospital, the Allegheny County Dietetic Association was founded in 1918. Willson proved to be a leader in dietetics education, creating internships for students from Carnegie Institute of Technology’s (now Carnegie Mellon University’s) program in Home Economics with a specialty in Foods and Nutrition. In 1932, she became president of the Pennsylvania Dietetic Association, which still exists today as the Pennsylvania Academy of Nutrition and Dietetics.

“It’s easy to see that our entire profession has deep roots in Pennsylvania and in Pittsburgh,” notes Dodd, a 1962 graduate of the Carnegie Institute program.

“In the early 1970s, there were visionaries at Pitt like Drs. Anne Pascasio and Mary Ann Scialabba,” continues Dodd. “There was no longer a program at Carnegie Mellon, so they pushed for the addition of a clinical dietetics program in the newly established School of Health Related Professions.

“They built a program that was unique in every way,” she adds. “Students received an education that was the total package because the curriculum took into account the psychological, physiological and sociological needs of individuals and how the quality of food and access to food affects people in the world today.”

That program has continued to evolve. It currently ranks tenth in the nation for dietetics education.

“Our ranking speaks to our vision to lead among dietetics programs in advancing knowledge, skills and evidence-based practice of Registered Dietitian Nutritionists (RDNs),” says Assistant Professor and SMN Vice Chair Deborah Hutcheson. “The program faculty are innovators. This is what we do, and it is rewarding to be recognized!”

Dodd, a leader in her own right, served as president of AND from 1991–1992. Among other honors, in 2008 she received the AND Marjorie Hulsizer Copher award for her contributions to the profession and her dedication to creating new opportunities for dietitians and nutritionists. It is the highest distinction that the Academy bestows on its members.

While dietitians have always played important roles in the community, serving in hospitals and working alongside organizations such as the Red Cross, Dodd and Hutcheson see RDNs expanding into even more areas in the future.

“Today’s RDNs focus more on ‘managing’ than ‘curing’ diseases,” says Dodd. “We all know that chronic conditions such as heart disease and diabetes can be managed through proper diet and nutrition.

“But there are opportunities—and a need—for RDNs in new areas, such as the international arena,” she continues. “There’s also a very good and strong trend for RDNs to be part of integrated health teams, working alongside other health care professionals in the community.”

Hutcheson notes the Pitt program will continue to prepare students to meet the challenges of the future.

“Our Dietitian Nutritionist program provides opportunities for students to have interprofessional experience in simulation in the classroom as well as experience in the community with students from other health care professional programs,” notes Hutcheson. “Students also participate in interprofessional supervised experiential practice internships in collaboration with UPMC primary care practice groups and other health care practitioners that have some aspect of nutrition included in their scope of practice.”

“They learn about lifestyle change counseling, nutritional genomics for personalization of the nutrition care plan, and the ‘whole food’ approach to include required nutrients, phytonutrients and food additives,” she continues.

Hutcheson says there is a continually changing landscape in nutrition due to research and the realization from both health care professionals and the general public that food has an effect on health optimization.

“To that point, we strive to have a very strong community presence and engage our students in the community,” says Hutcheson. “It’s important for them to teach the basics on general topics such as food safety and sustainability, food preparation and cooking skills, and shopping and growing foods.”

“We stress the fact that diet and nutrition are personal,” adds Dodd. “What works for one person does not always work for another. We continually remind our students that as they move forward in their careers, they must always take into consideration the medical, social and financial situation of their clients.”

Based on past history, dietitians and nutritionists from SHRS have created quite a recipe for success.



GAME CHANGER.

Health Informatics (HI) is a constantly evolving field. As data gets exponentially bigger and the demand for reliable information increases, working professionals are constantly challenged to step up to meet the changing needs of the health care industry.

Started in the Fall 2019 term, a new Master of Science in Health Informatics (MSHI) provides a flexible, high-quality and affordable way for HI professionals to advance their careers while they improve the quality of health care in the digital age.

The program consists of 36 credits, with classes that combine the business of health care and clinical knowledge with health care informatics and data analytics. Courses are offered in the evenings to accommodate busy schedules, and students may opt for full- or part-time enrollment.

In January 2020, an online component will be launched. It will be the first online MSHI program for the Department of Health Information Management (HIM), and one with a unique appeal to prospective students.

“The new program is unlike any other offered by universities across the country,” says Bambang Parmanto, professor and HIM chair. “Other programs focus on the technology of health informatics, but we thoughtfully designed a content-rich curriculum that combines health care business, clinical knowledge and informatics and data science.”

Parmanto believes the program addresses the growing need for professionals who can use data to improve the quality of patient care.

“We believe this program is what students have been waiting for,” notes Associate Professor and HIM Vice Chair Valerie Watzlaf. “With the MSHI degree, graduates will have more opportunities in areas such as health data science, cybersecurity, electronic health record implementation and interoperability, telehealth, Social Determinants of Health (SDOH) and population health.”

“The list is endless, and the jobs are plentiful—now and in the future,” Watzlaf continues.

The MSHI program provides the most state-of-the-art content and skill attainment for HI professionals. The curriculum was designed from the ground up, with input from faculty, HIM graduates and health care industry leaders.

Watzlaf says it takes a practical, hands-on approach, incorporating capstone projects, interactive assignments and extensive interactions with employers, researchers and faculty.

There is also a diversity of tracks and certificate options.

“Students can select from three different tracks that correspond to their background, interests and career plans,” explains Associate Professor and MSHI Program Director Leming Zhou. “They can choose data science, registered health information administrator (RHIA) or health care supervision and management (HSM).”

“The tracks reflect different emphases in the three areas of MSHI,” says Parmanto. “Data science focuses more on the informatics and data science area, RHIA emphasizes health care business and clinical knowledge, while HSM puts more focus on health care business. All have a good foundation in health informatics.”

“We will teach our students to be life-long learners and become highly adaptive to the constantly changing field so they can always be competitive in the market,” adds Zhou.

Students in the MSHI program and graduates of the undergraduate Health Information Management program can also opt for four ten-credit certificate programs: Health Data Analytics, Health Information Cybersecurity, Leadership in Health Informatics and Revenue Cycle Management.

Credits earned through the certificate programs can be applied to the MSHI program at a future point in time.

Zhou notes that many working professionals want to receive further education in Health Informatics, but sometimes cannot because of job and family obligations. “The new MSHI offers a high-quality program that is flexible and affordable and is supported by the full-time faculty of HIM and the resources from the University of Pittsburgh.”

“Health Informatics uses data to help individuals live longer and better lives,” states Parmanto. “Graduates of our program will be well-prepared to meet the growing need for HI professionals to analyze trends, make projections, monitor outcomes and help improve patient care.”

He adds, “Our goal is to be the leader in this area, and we have no doubt that the new MSHI is a step in that direction.”



NEW OPTIONS FOR HI PROFESSIONALS

By Sarah Smith (BS '16)

“I have wanted to come back to SHRS for a graduate degree for a while, but with working full time and business travel, it just wasn’t realistic. With this new program, it is possible. MSHI stands out because of its concentration of IT/data analytics. It has a medical/health care perspective with a little bit of business thrown in. Big data is the future, and with it we have the ability to provide health care to people on a more localized, personal level.

Wherever my career takes me in the future, I believe that this program with the data science concentration will help me elevate my technical knowledge and skills. It will also give me the ability to more proactively identify creative quality improvement opportunities and learn how to leverage a variety of data analytics tools.

SHRS has an incredible reputation of partnering with many industry leaders and it prioritizes teaching students about industry trends and the latest research. I’m confident that this program will give me the tools I need for the future.”

Smith is currently an IT Medicare Project Manager for Aetna, a CVS Health Company. After completing Aetna’s IT Leadership Development Program, she began working in IT Government Program Delivery in the Medicare space.



SIMULATION INFORMS CLINICAL PRACTICE.

There’s a very good reason why *U.S. News & World Report* ranks Pitt’s Department of Occupational Therapy (OT) fourth in the nation in its survey of Best Graduate Schools.

“Our students have rich, focused opportunities to synthesize new knowledge, practice complex skills and reflect on their practice,” says Professor and OT Chair Elizabeth R. Skidmore. “In great part, these opportunities come as a result of our students’ exposure to clinical simulation.”

Associate Professor Joanne Baird explains that clinical simulation—one form of experiential learning—has been at the heart of the OT Department philosophy for more than a decade. “Students learn by doing,” Baird notes. “That is why clinical simulation is thoroughly integrated into our curriculum.

“Every OT student is immersed in clinical simulation from their very first term until they begin their clinical placement.”

The simulation can come in the form of a standardized patient, a medical student or community volunteer “acting” as a patient, or a high-tech manikin. First-term students, for example, learn to perform assessments with the standardized patients, while more advanced students use both standardized patients and manikins to help guide their treatment protocols.

Kelly Dickson (MOT ’16, CScD ’17), an occupational therapist at UPMC Cranberry Place skilled nursing facility, recalls working with a manikin during her student days. “The experience definitely challenged my ‘in-the-moment’ problem solving, attention to detail and stress management skills,” says Dickson.

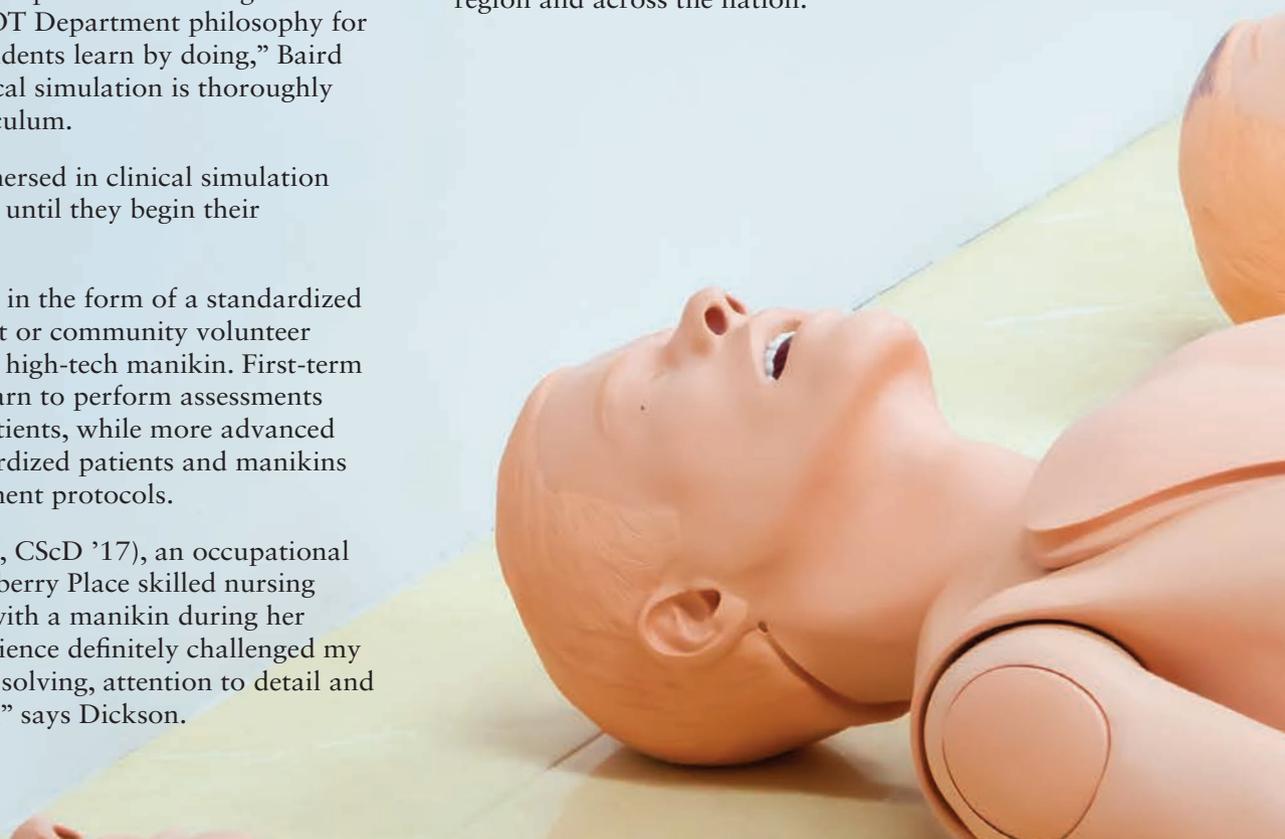
“If I did not handle a manikin correctly during a transfer from the hospital bed to a wheelchair, its status changed, forcing me to stop, figure out what was going on, and address the problem,” continues Dickson. “While not every transfer during my time as a fieldwork student was perfect, I learned how to always prioritize patient safety while keeping myself and my team safe.”

According to Haley Feller (BA ’14), Doctor of Occupational Therapy student, the feedback she received from manikins, standardized patients and her instructor was invaluable. “It allowed me to reflect on areas of strength and improvement that I may not have noticed within myself.

“Knowing that there were aspects of the therapy sessions that I conducted well increased my confidence with client interactions moving forward,” she continues.

“There are many different types of learners in the classroom,” says Baird. “By giving them a variety of opportunities to put their knowledge into practice, we can ensure they will be well-prepared to work with actual clients.”

Skidmore credits Baird for the thoughtful and comprehensive integration of clinical simulation into the curriculum. “Thanks to Dr. Baird’s efforts, students enter their formative and summative fieldwork training with a high level of mastery and confidence,” notes Skidmore. “It is evident that our process works when we receive high praise from fieldwork educators who supervise our students in various practice settings in the region and across the nation.”



During her Level II fieldwork, Feller's supervisors complimented her on her ability to explain activities to clients and to select activities that were appropriate to the clients' needs and deficits. They also noted that she arrived at her rotations very well prepared and willing to learn.

Now a fieldwork educator herself, Dickson adds that she enjoys sharing her own clinical simulation experiences with her current students. "We talk about how clinical simulation allows students to focus on what they need to do in order to be the most successful."

According to the U.S. Bureau of Labor Statistics, occupational therapy remains one of the fastest growing professions, with a projected need for 124% more OT practitioners in the next ten years. To meet that need, Pitt's Department of Occupational Therapy currently offers four degree programs, including a Doctor of Occupational Therapy (OTD), which focuses on research, leadership, program and policy development, advocacy and advanced skills.

"I have no doubt that our OTD students will graduate with the skillset they need to assume leadership roles in this dynamic and valuable profession," says Baird.

REFLECTIONS ON OT TRAINING

By Kristy L. Yoskey (MOT '06)

"During my time at Pitt, we were able to simulate with each other on how to transfer, complete trigger point massage and practice many other techniques, but nothing compared to the real thing in fieldwork. Level II fieldwork gave me the confidence I needed during my first week working in a skilled nursing facility after graduation.

"One of the greatest impacts on my education and learning was when our professors would bring one of their actual clients into the classroom. We were afforded the opportunity to work with many diagnoses, including a young woman with advanced multiple sclerosis. We observed the impairments and remaining functional abilities as well as the prescribed treatment plan and how the patient reacted to it. Our professors facilitated discussions about treatment approaches and conditions during and after each experience. These experiences greatly impacted how I approached treatment at the start of my OT career.

"I credit the OT faculty, particularly Pam Toto, for seeing the fire and passion in me and helping me realize my full potential."



Yoskey is currently senior vice president of Clinical Strategies, HealthPRO®/Heritage, an innovative, privately owned consulting and therapy management firm.



PROFESSIONALIZING THE CAREER PATH FOR ATPs.

The field of assistive technology is growing exponentially, yet Assistive Technology Providers (ATPs) have always traveled a long and circuitous route to certification. Depending on their level of education, ATPs had to work in the field for up to 6,000 hours before they could sit for the certification exam. The process was costly to both employers and employees and limited the number of ATPs on the job.

No longer.

SHRS's recently accredited Master of Science in Rehabilitation Technology (MSRT) program greatly reduces the number of hours students need to work prior to certification. They earn credit for clinical experiences and internships as well as for their education, and graduate ready to sit for the ATP exam.

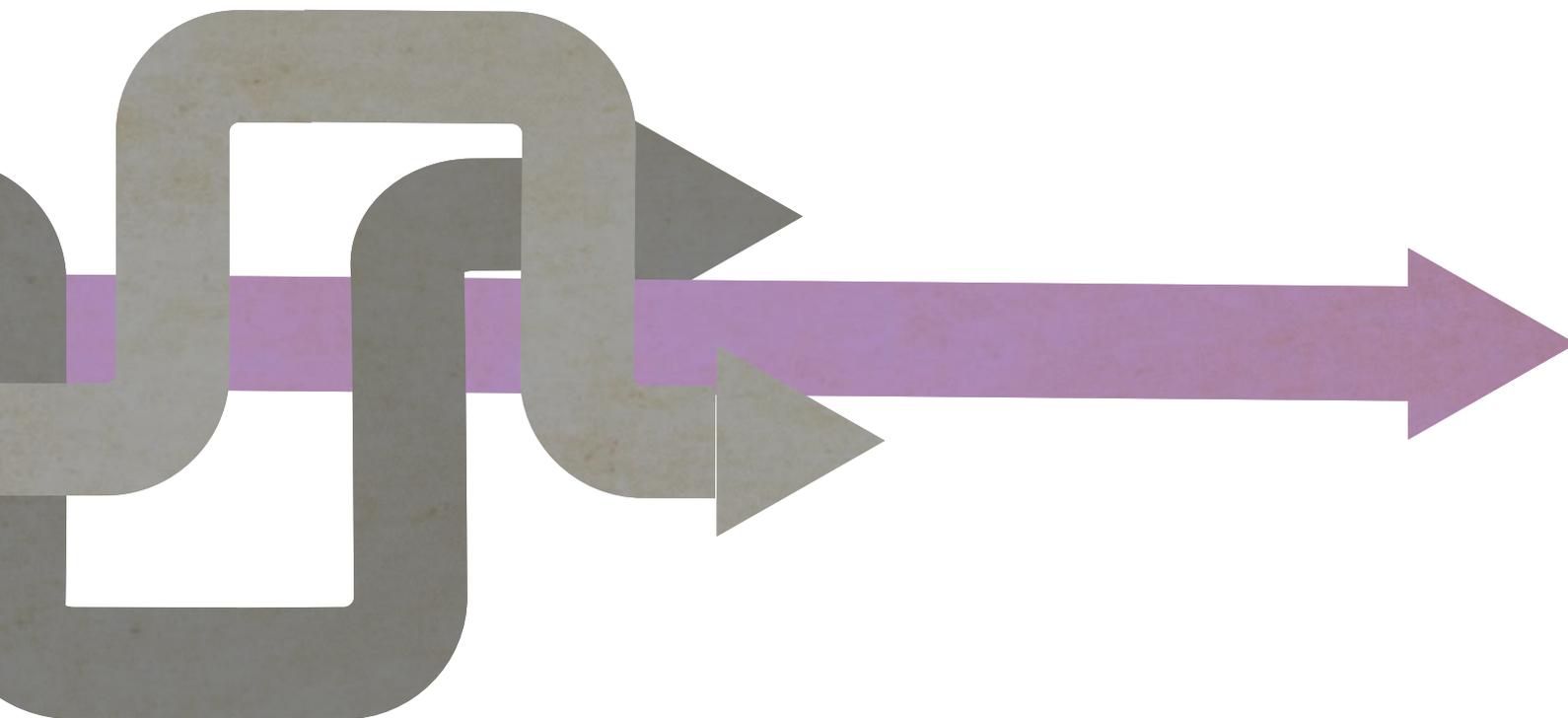
Jonathan Pearlman, associate professor and chair, Department of Rehabilitation Science and Technology (RST), says this accreditation of such a program is the first in the nation and carves out a training program that leads directly to a high-paying career in a high-demand profession.

“For many years we tracked our graduates and we know they go on to become leaders in the field,” notes Pearlman. “But now we are filling the pipeline of ATPs much faster.”

Mark Schmeler, associate professor and RST vice-chair of Education and Training, adds that with the rise in the number of individuals who use wheelchairs, employers are in desperate need of ATPs. “I’ve had employers tell me that they could use 100 more ATPs in their companies. We recognized that we had an obligation to meet their needs and decided to elevate the training process through accreditation.”

RST Associate Professor Mary Goldberg collaborated with the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) to establish the criteria for accreditation by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Schmeler says the process took approximately nine months and included a self-study that demonstrated how Pitt’s MSRT courses met the standards of the accrediting body.

“We detailed the number of hours our students spent in clinics working with patients, as well as how we assess their progress,” explains Schmeler. “We also outlined our research methods and ethics policy and surveyed the job satisfaction of our graduates. It was a demanding process but an extremely valuable one because it professionalized the career path for future ATPs.”



“ATP certification is an instant boost to a student’s resume,” says Mitch Bell (BS ’16, MS ’19). “When I was being interviewed for positions right after graduating, employers were excited to learn that I could be certified almost immediately. I accepted a position with National Seating & Mobility just one week after graduation in April, passed the certification exam in June and currently work as an ATP.”

“The program is a win-win-win,” notes Pearlman. “Our accreditation definitely helps build the profession, but it also streamlines the process for employers and enhances job prospects for graduates.”

Recent graduate Anthony Yang (MS ’19) says the MSRT degree provided him with great opportunities for personal and professional development along with financial gain. He says, “I accepted a position as a sales account manager with Sunrise Medical, typically requiring many more years of experience, at a salary that is at least three times greater than my previous job.”

Schmeler adds the RST department plans to make additional changes to improve career opportunities, including launching several post-baccalaureate certificate programs and other academic options. “We want to make it more affordable—and more flexible—for students to get the education they want,” remarks Schmeler.

Stephanie Vasquez (MS ’19) followed the Research track while completing her two-year MSRT. As a clinical and research coordinator for the University of Pittsburgh working with the International Society of Wheelchair Professionals and at the Center for Assistive Technology, Vasquez is involved in both technical and clinical services related to wheelchairs and other assistive technologies.

“Accreditation is crucial to the future of rehabilitation and assistive technology and it is a great advantage that the Pitt program offers,” notes Vasquez.

AN EMPLOYER’S PERSPECTIVE

By Eric Grieb

“There is clearly an insufficient number of Complex Rehabilitation Technology (CRT)-focused ATPs to meet the demands of the industry. At Numotion, we employ 425 ATPs nationwide, but consistently struggle to keep up with the growing demand of the market.

“Currently our typical ATP developmental candidate spends six to nine months gaining the experience required to sit for the exam. Passing the exam is a seminal event for ATPs which then allows for investment in ongoing, professional training and development. The lag time between graduation and certification represents significant cost to the business, as we are compensating employees who cannot begin to contribute until certification is achieved.

“Hiring graduates from Pitt’s program has always been very appealing to me, based on the quality and preparedness of the candidates. But the new program, with its emphasis on core competencies in CRT and shortened timeframes for exam eligibility, will allow me to prioritize the recruitment of students emerging from this program. I am truly excited about the potential of this offering, both for those future ATPs and for our industry as a whole. This is a great step forward.”



Grieb is vice president of Commercial Development at Numotion, the nation’s leading provider of complex rehabilitation technology.



WHAT A RIDE!

From a vacant locker room and storage area in Building 4 of the VA Pittsburgh Healthcare System in 1994 to today’s 28,000-square-foot, state-of-the-art workshop and testing site in Pittsburgh’s Bakery Square, the Human Engineering Research Laboratories (HERL) has evolved into the world’s premier wheelchair and rehabilitation engineering research facility.

According to Distinguished Professor Rory A. Cooper, founding director of HERL and VA senior research career scientist, “It’s been a pretty exciting ride!”

“My original goal was to create an environment where therapists, engineers, physicians, even lawyers, would come together to bring technology to the marketplace and make a difference in the lives of people with disabilities,” says Cooper.

Twenty-five years later, the accomplishments of HERL speak for themselves.



A model of multidisciplinary education.

A collaborative effort of the University of Pittsburgh School of Health and Rehabilitation Sciences, School of Medicine, Swanson School of Engineering and the Innovation Institute, the VA Pittsburgh Healthcare

System and UPMC, HERL is a model of true multidisciplinary education. Thousands of students from a variety of programs, including engineering, rehabilitation sciences, physical therapy, medicine and other health sciences, have received training at HERL. Many go on to careers in rehabilitation technology and research. Others take what they’ve learned and apply it to industry.

The Oblique Angle Suspension Caster Fork, for example, was invented by HERL and is now sold by TiLite as the Glide. This technology reduces shock and vibration exposure to manual wheelchair users and extends the useful life of wheelchairs.

Ian Rice (PhD ’10) is a teaching associate professor in the Department of Kinesiology and Community Health at the University of Illinois Urbana–Champaign. With a Master of Occupational Therapy background, he worked at HERL while pursuing his doctoral degree in Rehabilitation Science. Rice praises the lab’s multidisciplinary approach.

“Students were encouraged to participate in research projects, focus groups and hypothesis development in group settings to formulate solutions based on the same multidisciplinary approach,” recalls Rice. “Additionally, we were encouraged to survey the perspectives of end users when we approached new assistive technology projects.

“By targeting the most salient disability-related topics and including end users in the process, we ensured we were asking the right questions.”

World-changing research.

Postdoctoral researcher Jonathan Duvall (BS ’10, MS ’13, PhD ’18) says he is constantly amazed at the reach of HERL’s work when he attends disability conferences around the country. “I see so many people using technology that has been developed at HERL—specifically, the ergonomic push rims and power-assisted devices for manual wheelchairs.

“It reminds me that what we are currently working on will someday make a difference and be routinely used by wheelchair users,” he continues.

Product development is only part of the story. HERL researchers have developed clinical tools and assessments that redefine the standards of rehabilitation engineering and improve the quality of care for wheelchair users.

In 2007, Alicia Koontz, associate professor and associate director for research at HERL, collaborated with Dr. Michael Boninger on “Clinical Practice Guidelines for Upper Extremity Presentation.” Koontz observes, “This led to a wave of increased awareness of how important making changes to technique and equipment is to preserving upper limb health, especially for users of manual wheelchairs.”

The large body of work conducted by HERL investigators contributed to the foundation for these guidelines that forever changed the prescription, selection, fitting and training related to wheeled mobility.

“Clinicians all over the globe have changed the way they approach wheelchair prescription and training based on these guidelines,” continues Koontz.

More recently, HERL Medical Director Dr. Brad Dicianno led the charge to develop evidence-based guidelines for the treatment of people with spina bifida. Using input from 100 spina bifida experts around the world, the guidelines cover 25 topics including physical activity, mobility and quality of life for patients from birth through adulthood.

Serving those who served.

The care and support of wounded warriors has always been at the core of HERL's mission. Over the years, it has conducted research at the National Veterans Wheelchair Games and National Disabled Veterans Winter Sports Clinic. Activities such as these allow HERL staff members to disseminate research results, educate wheelchair users about the work of the lab and recruit participants in upcoming studies.

As a U.S. Army veteran, Cooper understands that when service members return from deployment with visible or hidden impairments or challenges, it is important for the entire community to provide support. "The long-term impact of wounds, injuries and illnesses can manifest into permanent disabilities," says Cooper. "While there is no one single solution that will work for all service members, there are many pathways that lead to success as service members transition from military to civilian life." Cooper compiled this helpful information into a popular book, *Promoting Successful Integration*.

In addition, Cooper has authored several other books to assist veterans and their health care providers. *Care of the Combat Amputee*, which he co-wrote with Dr. Paul F. Pasquina, is considered to be the "gold standard" of rehabilitation medicine and is required reading for military health care providers. *Warrior Transition Leader*, co-authored by Cooper, Pasquina and Ron Drach, is one of the most widely read military medicine books published.

A look at the future.

"There is no question that HERL will continue to grow," notes Cooper. "We are currently one of the few programs that truly engages students and faculty from across the University. In the future, I see even more of that, with increased interactions with various departments from SHRS and the University as a whole."

Cooper also cites the work being done by alumni at HERL satellites in Brazil, Japan, Colombia, Korea, China and Taiwan, as well as at several universities in the United States. He plans to expand the number of satellites worldwide.

"We serve as a world leader in advancing the state of science in rehabilitation engineering and wheeled mobility," says Koontz.



"But we also send well-educated and trained individuals into the field all over the globe, and they go on to become leaders."

"We take great pride in HERL," adds Cooper. "Not only is our research and development changing the lives of people with disabilities, but the lab itself is changing the lives of scientists. We welcome diversity of all sorts and create an inclusive environment where ideas have no limitations."

MILESTONES IN HERL HISTORY

- The digital SMARTWheel allows scientists to collect data from wheelchairs while people are performing real-world tasks.
- The Pushrim Activated Power Assist Wheelchair helps to improve musculoskeletal health.
- The first ISO wheelchair standards lead to the introduction of appropriate wheelchairs and the removal of inappropriate products from the market.
- Research into whole-body vibration exposure leads to improvements such as vibration dampening cushions, backrest fitting and suspension elements, as well as new standards for pedestrian walkways.
- Telerehabilitation research leads to real-time wheelchair remote consults and the first application of machine learning to optimize wheelchair selection and fitting.
- The Transfer Assessment Instrument is developed to help clinicians evaluate and teach wheelchair transfer skills.
- The Virtual Seating Coach is the first widely used artificial intelligence device used to promote compliance with clinical guidelines.
- HERL creates the Personal Mobility and Manipulation Appliance, the first successful robotic wheelchair with bimanual robotic manipulators.
- MEBot is introduced as the first robotic wheelchair designed for obstacle negotiation used by people with severe and complex disabilities.
- HERL establishes the International Society of Wheelchair Professionals to link consumers and professionals to improve the quality of service delivery and access to appropriate wheelchairs.





THE WORLD IS LISTENING.

“Clinical education is the linchpin of any audiology program because students learn best by seeing their impact on the lives of real people.”

With those words, Elaine Mormer, associate professor and vice chair for Clinical Education, Department of Communication Science and Disorders (CSD), defines the past, present and future mission of Pitt’s audiology program.

It is a philosophy that has transformed the program into one of the best in the nation.

Because students learn through evidence-based instruction and extensive clinical exposure, they move deftly between classroom and clinic, evaluating and treating individuals with a wide range of hearing disorders.

Opportunities for hands-on learning were not always as robust as they are today. When the audiology program was housed in the College of Arts and Sciences (CAS) as a part of CSD, clinical training took place at an in-house Speech and Hearing Clinic in the Cathedral of Learning as well as at a limited number of local sites, such as Mercy Hospital, Children’s Hospital and the VA Pittsburgh Medical Center.

According to Associate Professor Barbara Vento, who received her Master of Science in Audiology in 1977, “The in-house clinic was largely for Speech-Language-Pathology evaluation and treatment. Hearing tests were part of the speech evaluation, but students generally did not see patients just for hearing.”

A big change came in 1990 when Associate Professor Catherine Palmer arrived at the university and charged Mormer with expanding the number and types of clinical experiences for students. “I was handed a single piece of paper with possible clinical sites listed,” says Mormer. “At that time, I was a part-time clinical instructor four hours a week and I began to work on expanding placement opportunities for our students.”

Today, her list is an extensive database. Mormer and Vento coordinate clinical placements at more than 105 different facilities around the country.

“One of Elaine’s talents is relationships, and that is what kept the program going so many years ago with amazing clinical placements in Western Pennsylvania,” says Palmer. “Relationship building is still one of our primary strengths, but now we have a footprint that reaches across the entire country.”

Palmer credits former CSD Department Chair Malcolm “Mick” McNeil with leading the program into a new era of audiology education. “In 1997 Mick took a bold step and moved the CSD Department out of CAS into the School of Health and Rehabilitation Sciences (SHRS),” notes Palmer.

“SHRS was a school that valued clinical education, and it fit perfectly with Dr. McNeil’s vision.”

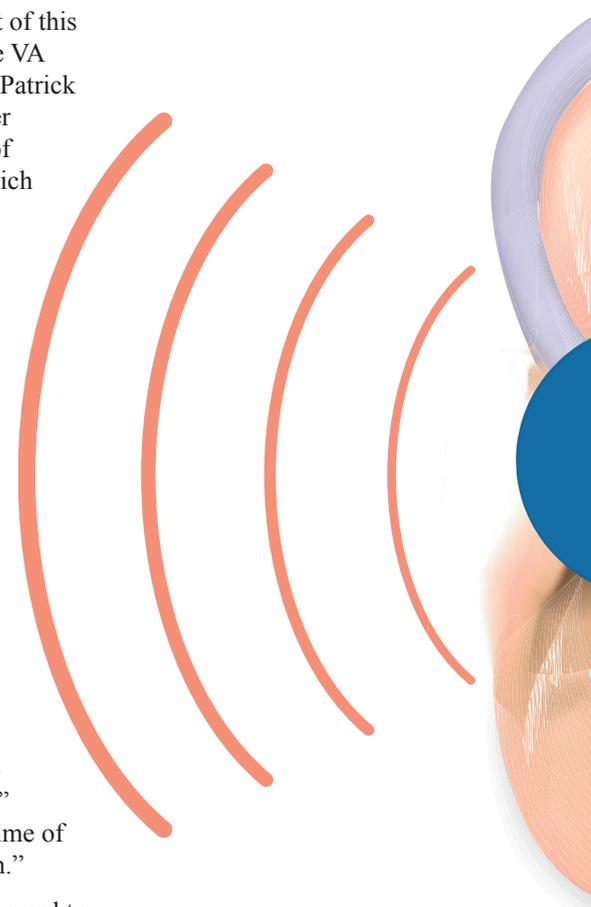
As part of the move to the new school, the in-house Speech and Hearing Clinic was closed, and first clinical experiences were integrated into existing clinics with the Audiology faculty functioning as the direct clinical instructors.

The clinics of UPMC directed by Dr. John Durrant and Dr. Diane Sabo were an important part of this experiment, as was the VA clinic, directed by Dr. Patrick Doyle. In 1998, Palmer took over as director of UPMC Audiology, which culminated McNeil’s goal of having a CSD faculty member also be the director of UPMC audiology clinical services. This appointment provided a strategic relationship between the two entities to ensure outstanding patient care and clinical education.

“UPMC was just beginning to gain national prominence as a medical center, so it was a perfect storm,” adds Palmer. “And a time of rebirth for our division.”

When the profession moved to granting a clinical doctorate as the entry-level degree, the faculty at Pitt took it as a challenge to create the best AuD program in the country. Instead of simply adding the required 12-month externship, the faculty collaborated to restructure the entire program to ensure that students graduated ready to practice at the highest level.

Vento took on the task of making Pitt a model of how full-time externships are vetted and organized for preceptors and students. Today, as the externship coordinator, she helps to match students to placements that are best suited to their career goals.



“We have access to clinical placements that train so much more than how to test hearing thresholds,” says Vento. “We find placements for vestibular assessment, placements for the evaluation of tinnitus and rehabilitation, cochlear implant placements, pediatric placements and placements for students interested in a private practice.”

Vento says students also are encouraged to participate in a wide range of community activities. “Audiology students provide hearing services for CSD undergrad students, SHRS faculty and staff. They also volunteer at community hearing screenings and health fairs. They visit a local senior day care center to help with their hearing needs and perform hearing screenings for the students at Falk School as well,” she continues.

“We continue to be one of the few programs that can truly claim that students receive both classroom and clinical experience across the entire scope of practice in hearing and balance and across the lifespan,” says Palmer.

“In addition to clinical practicum, our students attend hands-on class experiences at various clinical sites,” explains Mormer. These take place at the Hearing and Balance Center at UPMC Mercy, the pediatric audiology clinic at Children’s Hospital, the UPMC Center for Audiology and Hearing Aids at Eye & Ear and the audiology department at the VA Pittsburgh.

“This not only gives our students a depth of experience but helps them build familiarity in these sites and a network of professional colleagues,” Mormer adds. “Pitt really has become expert in clinical education,” she continues. “Because of our expertise, we have become a resource for the entire country.”

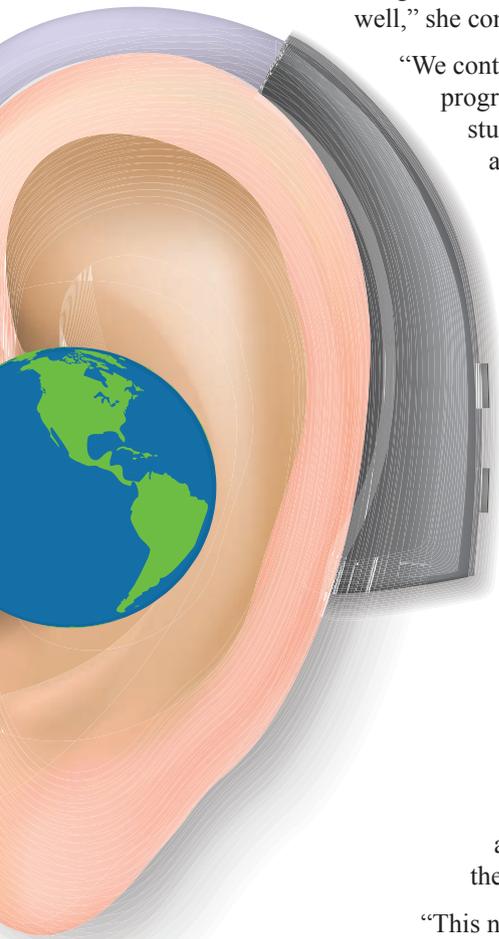
Since 2005, Pitt has been hosting a biennial conference that focuses on “teaching the teachers.” At each conference, guest faculty who are experts in their field come to explain how to teach specific content, such as amplification, practice management, pediatrics, counseling and clinical instruction. The 2019 conference focused on teaching vestibular assessment and rehabilitation across the lifespan.

Palmer, who is the newly elected president of the American Academy of Audiology, says the CSD Department has just entered a new renaissance period. “With the addition of Dr. Bernie Rousseau as department chair, Dr. Bharath Chandrasekaran as vice-chair of Research, and Dr. Nicole Corbin (the newest audiology faculty member), we are opening new horizons of audiology research that will directly impact hearing care.

“We are in a position to play a significant role in the future of audiology,” she continues. “We are on the forefront of understanding that hearing loss is a modifiable risk factor in cognitive decline, social isolation, depression and falls, and we have the clinical and research capacity to implement programs targeted at treating hearing to improve health outcomes. The Pitt AuD students get first-hand experience in these innovative clinical programs.”

Palmer says, “By advancing research in these areas, we will create clinicians who are critical consumers of research as they implement evidence-based practice.”

In other words, the Pitt AuD program will continue to be the premier voice for audiology education.



VOICE OF EXPERIENCE.

By Catherine Barrett McGrath (MA '98)

“It was the broad spectrum of clinical opportunities that were available to the audiology student that drew me to Pitt. The various clinical settings allow students to experience the real challenges we treat as audiologists. I specifically treasured the time spent at the Eye & Ear Institute, working with various clinicians to identify and treat patients with vestibular disorders. Treating those with hearing loss and fitting them with hearing aids was an experience I will never forget.

“I feel that during clinical practicum, students develop great skills when working one-on-one with patients while having a supervisor at hand. Seeing first-hand the challenges hearing loss, tinnitus and vestibular disorders present and learning how to evaluate and treat in real time is critical.

“The excellent professors in the program challenged me to be a critical thinker. They prepared me to go out into the field and evaluate, treat, verify my results and look at each patient as an individual. Attending the University of Pittsburgh’s graduate program in Audiology was one of the single greatest decisions I have made in my life.



McGrath is a clinical audiologist and owner of Hearing Specialists of NEPA in Scranton, Pa.



DRIVING A NEW MODEL OF CARE.

“Fifty years ago, emergency medical services (EMS) provided basic life support,” recalls Matt Zavadsky, EM adjunct professor and chief strategic integration officer, MedStar Mobile Healthcare, Fort Worth, Texas. “The system was designed for patients who were suffering cardiac arrest. Many services were delivered by volunteers, and financing was provided by federal block grants.

“Today, things are dramatically different,” he continues. “The fact is, only 1 percent of emergency calls are cardiac arrests. Financing is complicated and payors are looking for value.”

Finally, that traditional model of care is shifting into a new gear.

“For decades and still today, the only way EMS could be paid was if the ambulance transported patients and drove them to the hospital emergency department,” explains Professor Walt Stoy, Emergency Medicine (EM) program.

“Basically, we were paid by the mile,” says Zavadsky. “Today we understand that this is not the most effective—or efficient—way to deliver care.”

Zavadsky, who has been in the EMS profession for 40 years, cites positive changes in the industry that will result in better patient outcomes and more cost-effective care in the near future.

Beginning in January 2020, Medicare will recognize a new voluntary payment model that allows approved ambulance services to navigate patient care instead of simply providing transportation.

According to Zavadsky, “This is transformative.”

“From now on, ambulance agencies will be paid to evaluate a patient and provide a differential diagnosis in the field,” says Stoy. “They will make an informed decision as to whether or not the patient truly needs treatment in a hospital emergency department, or perhaps would be better treated at an urgent-care center or other location.”



The CONNECT Community Paramedic program in Pittsburgh is a pioneer of this new model of care, better known as Mobile Integrated Healthcare–Community Paramedicine. It is the longest continuously running program of its kind in the United States.

Christie Hempfling, manager of the CONNECT community paramedic team, explains how it works. “We are not a ground transport service. Instead, as community paramedics, we assess vulnerable patients, looking for issues with their physical and behavioral health and with other social determinants of health that may be affecting their ability to enjoy a high quality of life. Then we try to connect them with the appropriate system of care.”

If the patient has the physical, emotional and cognitive ability to work independently, CONNECT community paramedics serve as patient navigators, pointing the patient to the appropriate systems of care. If the patient cannot navigate through those systems alone, the community paramedics step in as patient advocates. “Sometimes we have to do a little ‘hand-holding’ to ensure patients get the care they need,” Hempfling continues. “But this is the best way to help them get the type of care that will most likely address their underlying medical issues.”

THE 911 CALL OF THE FUTURE.

A patient named Sam suffers from Chronic Obstructive Pulmonary Disease (COPD). When he can't breathe and realizes he is out of his prescribed rescue inhaler, he calls 911. A paramedic arrives at his door, evaluates his condition and gives him a breathing treatment. They discuss what caused the flare-up of the COPD, and why the prescription was not refilled. The paramedic either calls Sam's physician for a new prescription or the pharmacy to request a refill. He then arranges a ride-share service to take Sam to the pharmacy. The paramedic returns to visit Sam the next day and together they call the pulmonologist to make a follow-up appointment for Sam.

The new model provides immediate and follow-up care for the patient and avoids a trip to the emergency department with its cascading array of costly tests, services and possible hospital admission.

Zavadsky notes that MedStar Mobile Healthcare has been using paramedics as patient navigators in the Fort Worth area since 2009. He says that payors such as Anthem have begun paying for patient navigation, not just transport.

“That adds up to value,” states Zavadsky. “The EMS system of tomorrow will be driven by the value we can bring to the person who is paying.”

Hempfling agrees. “There is a growing body of evidence to show that when you connect people to the appropriate system of care, you can significantly reduce the cost of health care.”

As the EMS field evolves into a patient-navigator model, Stoy wants to ensure that EM programs step up to the challenge. “Paramedics will need even stronger critical thinking skills,” says Stoy. “They must be equipped to make more informed decisions on the spot. We at Pitt are on the cutting edge of this important change. We're prepared to provide the didactic and clinical knowledge our students need to meet the health care demands of the future.”

ON CALL.

By London Kimbrugh (BS '16)

“In my current role as a community paramedic, I receive referrals for patients who are at risk for going back and forth into the hospital for various medical reasons. It is completely different than what I originally thought I would be doing upon completing the EM program.

“I recognized early on that helping people at the most vulnerable points in their lives was extremely important to me. However, community paramedicine has helped me to see the picture on a larger scale—to look at patients from a holistic point of view and identify barriers that make their lives difficult.

“This model is important when you think about the patient who does not fit the traditional mold. They may be individuals who need additional support or have complex medical conditions. As a community paramedic, I can help tailor services to meet patients' specific needs and provide them with wrap-around support.”

Kimbrugh is an EMT-P, serving as a community paramedic for the CONNECT Community Paramedic program. She also plays a lead role in the PORT program (Post Overdose Response Team), helping to target individuals struggling with the opioid crisis.



RATCHETING UP.

For more than 30 years, the Neuromuscular Research Laboratory (NMRL) in the Department of Sports Medicine and Nutrition (SMN) has been a model of interdisciplinary collaboration and partnership. Its rich legacy of studying musculoskeletal injury prevention and human performance optimization has benefited elite athletes and military personnel as well as other active individuals.

Recently, Bradley Nindl, NMRL director and professor, took a bold step to expand the capabilities of the lab and push new knowledge forward.

“With a small starter funding package and a lot of resourcefulness from members of our team, we began to build something out of nothing,” says Nindl.

The “something” has evolved into a unique biochemistry lab that explores the ways biomarkers affect human performance.

Assistant Research Professor Brian Martin volunteered to be part of the “construction crew” while working on his various research projects. To get the lab up and running, he connected plumbing and constructed walls to provide space for collecting and analyzing data, including blood and tissue samples.

“This lab is unique,” notes Martin. “Unlike biochem labs in other universities, we do everything on site. This cuts down on costs and time and allows researchers to play a larger role in the data collection and analysis.”

“It’s more meaningful when you can be part of the entire process,” he continues.

The new lab leverages state-of-the-art technologies such as a MAGPIX multiplex system, ultrapure water filtration system, BioTek Synergy multimode microplate reader, Leica Biosystems Cryostat, Tuttnauer autoclave and two -80° freezers, which currently allow for onsite sample storage and everything from basic assays to sectioning and fixation of tissue for immunohistology. The lab and all equipment and processes meet requirements for Biosafety Level 1.

With the addition of these capabilities, the NMRL was poised to pursue new research opportunities.

In the Soldier Performance and Readiness as Tactical Athletes (SPARTA) training study, NMRL researchers are collaborating with the British Ministry of Defence to mitigate injuries of both men and women during ground close combat (GCC). While previous studies looked at neuromuscular performance of women in GCC roles, the SPARTA study examines the responses of both men and women during operational tasks. It aims to identify which physical training interventions are most effective for improving performance and preventing injury.

Soldiers are assessed on a variety of measures that include physical performance, biomarkers and biomechanical analysis over a 24-week period.

“We know that resistance training affects muscle and bone,” explains Adam Sterczala, a postdoctoral researcher in the NMRL. “By collecting and analyzing samples of muscle tissue from the participants’ quadriceps, we can examine how the muscle fibers adapt to the different training protocols and whether these adaptations differ between men and women.”

“In the end, we can help determine what is the best training protocol for men, and what is the best for women,” Sterczala adds.

“We try to be as wholistic and comprehensive as possible,” adds Nindl. “By measuring different variables, we provide part of the answers and hopefully move the science to a new level.”

In a different study funded by the Department of Defense, Martin and PhD student Meaghan E. Beckner are attempting to characterize psychological resilience and readiness of service members under simulated military operational stress.

“Service members experience stress in many forms,” says Martin. “Conditions such as physical exertion, cognitive overload, sleep restriction and lack of energy affect performance. By using seven batteries of tests under controlled laboratory conditions, we hope to be able to predict their performance in real-world, high-stress military training and occupational environments.”

Service members arrive at the NMRL for a five-day-and-night protocol that includes psychological, neurocognitive, psychomotor, sensorimotor, tactical, sleep and physiological evaluations and daily blood draws. At various points, calories and sleep are restricted.

Beckner says it’s very rewarding to be part of a program where PhD students can be face-to-face with participants and also work in the wet lab. “To have the biochem lab right here is a real bonus,” says Beckner. “I can collect and analyze the blood and be involved with every aspect of the process, which provides a very valuable experience.”

Nindl reports that the addition of the biochem lab opens doors to new partnerships. In the NASA Specialized Center of Research (NSCOR) project, for example, biomarkers are studied to determine the adaption and resilience of astronauts. NMRL is collaborating with researchers at Harvard University, the University of Pennsylvania and NASA to evaluate genes, molecules, cells and other biomarkers that may be affected by stressors such as isolation, confinement and operational stress. These studies are being carried out at testing sites here in the United States as well as at the Neumayer station in Antarctica.

“The novel information that will result from the NSCOR project will help to select astronauts who are more likely to maintain health and performance during long-duration space missions,” says Nindl. “We are honored to be part of this important work.”

He continues, “The capabilities of the new biochemistry lab allow us to take the NMRL to the next level of excellence and to help put the University of Pittsburgh and the city on the map as the leader in human performance optimization and injury prevention research.”





THE FUTURE OF COUNSELING IS NOW.

In today's political and social landscape, health care is under constant scrutiny. But according to faculty in the Clinical Rehabilitation and Mental Health Counseling (Counseling) program in the Department of Rehabilitation Science and Technology, the future of counseling holds promise—and that translates to better patient care.

Here are some highlights from a recent panel discussion among Associate Professor Laura Dietz and Assistant Professors Kelly Beck, Michelle Schein and Jamie Kulzer.

Improved Access to Services

Beck: Counseling used to be a fragmented field, but today it is a more unified and cohesive profession. Instead of training students in silos, we educate them in all areas of counseling, so they can play a larger role in a fully integrated health care system.

Dietz: In the future, I see counselors working with medical professionals on the front lines of health care. If there were greater access to mental health counselors in primary care practices, for example, individuals would feel more comfortable seeking treatment for issues including anxiety and depression that commonly co-occur with many health problems.

Schein: It can be really overwhelming to know how to find a counselor, and then scary to pick up the phone and call somebody to schedule that first appointment. If there were a counselor on staff in physician practices who could introduce themselves to individuals in that moment and just provide some additional information, it might increase the likelihood of the client actually receiving therapy.

Kulzer: Recently we've noticed an increase in the number of companies that use technology to integrate physical and mental health. For example, certain companies connect medical professionals to licensed professional counselors through an automated referral system and then link clients to the mental health provider best suited for them. This reduces the barriers to appropriate mental health care, as the counseling provider can contact the client directly.

De-stigmatizing Mental Health

Dietz: Although there's stigma associated with mental health, most everyone knows someone affected by a mental health disorder. Counselors can help educate the public and normalize seeking treatment for these disorders.

Beck: It's worth noting that as counseling becomes more integrated in our health care system, it will become less stigmatized.

Schein: We need to change our language when we talk about mental health. For example, we should stop saying a person "committed suicide." It would be a much better practice to say a person "died by suicide." When a person is struggling, they need to know that someone isn't going to judge them for their thoughts. Counselors are nonjudgmental.

Beck: In our society, there's a growing need for counselors to combat social issues such as the opioid crisis, increased number of suicides and traumatic events that occur in our communities, and chronic trauma experienced by disadvantaged races and groups.



Eliminating Cultural Disparities

Kulzer: Access to counseling services got better with the Affordable Care Act, but there are still many health disparities in certain populations. In the future, counselors must be better prepared to meet the needs of diverse individuals. Take the exceptionally high infant mortality rate among African American women. A recent article from *The New York Times Magazine* stated that the disparity between Black and White infant deaths in America is actually wider now than it was in 1850. Much of this is due to the stress of micro-aggressions that result in difficult pregnancies and birth complications.

Dietz: In our program, we strive to train culturally sensitive and culturally aware clinicians. We want counselors to understand that there are different issues and subcontexts that contribute to mental and physical disorders, and our approach to treatment needs to reflect that understanding. As counselors, we must meet our patients where they are and be open to hearing about their experiences and preferences for treatment.

Beck: There's definitely a link between physical health and mental health that we know more about thanks to advanced technology. We now know that chronic mental health symptoms, discrimination and trauma have a direct link to poorer health outcomes and addiction. Counselors can use evidence-based tools and interviews to identify clients who are at risk for self-harm or substance abuse and implement strategies and interventions that can reduce harm.

What the Future Holds

Schein: My vision for the future would be that counseling is thought of just like any other helping profession—meaning people wouldn't be ashamed or embarrassed to be connected with a counselor.

Kulzer: It would be great if going to counseling was like going to the dentist for a toothache. Maybe one visit will be all you need, maybe you need six or eight visits, or maybe you need to check in periodically to address the problem.

Beck: The evidence supports that when clients get treatment sooner, the outcomes improve. Strategies like mindfulness-based stress reduction are really cost-effective interventions for issues like anxiety and depression.

Dietz: The millennials are a generation that embraces therapy. Perhaps with generational shifts there will be more voices out there advocating for counseling, resulting in greater access to empirically supported treatments. The great thing about our Counseling program is that it provides a high level of training and supervision so our students are prepared to treat a wide range of mental health disorders and meet whatever challenges the future may hold.



What will the prosthetics and orthotics profession look like in 2070? Goeran Fiedler, assistant professor in the Master of Science in Prosthetics and Orthotics (MSPO) program, forecasts changes that will impact the treatment of patients and the education of clinicians.

“It’s not unrealistic to imagine that 50 years from now, limb loss will have been eradicated thanks to a cure for diabetes, surgical advances and new transplantation techniques. Some may say these medical advances threaten to make prosthetists unemployed. To be clear, nobody in the field sees this as a bad thing, but rather a very promising future.

“While it is a great job to build artificial limbs for people who need them, the really exciting part is seeing our patients walk again and enjoy a better quality of life. That is what motivates us to work in clinical prosthetics today. When the time comes that limb loss can be prevented entirely, it will certainly be widely celebrated.

“A glimpse into that future may be provided today by osseointegration, a surgical method that allows the direct attachment of prosthetic componentry to the bone end of the residual limb without the need for a socket. This removes one major aspect in fitting prostheses and therefore changes substantially the professional profile in this area. The technology is still fairly new and untested in many patient populations, but it promises great advantages for our patients as it matures and becomes more popular.

“In the next half century, orthotics and exoskeletons will have gained importance as life expectancy increases. A likely trend is that exoskeletons will be used not to treat a disability, but to enhance human performance. This will massively increase the demand for these devices—because everybody could use one—and for the fitting services provided by orthotists.

“Even as more and more medical conditions are being successfully treated, there will always be cases of infirmity, either caused by accidents, new diseases or simply old age. The boundaries of what is considered ‘old age’ have already moved substantially in recent decades, and it may be assumed that the trend will continue similarly.

“By 2070, some models predict the average lifespan may be 125 years. It is likely that older people will have gait impairments and other orthopedic conditions that require management by orthotics. Extrapolating from recent and current trends in both prosthetics and orthotics, it is easy to predict that we will see more high-tech devices to help replace lost function of muscles and the skeleton. These devices must be fitted and programmed for the individual user, which will likely entail a great deal of artificial intelligence and will require quite a different skill set from orthotists than today’s job profile.

“As the average age of patients increases, professionals will adjust goals and expectations to help patients learn to live with their disabilities for longer periods of time. To achieve these goals, technological advances will be more focused on safety, comfort and ease of use.

“During the next 50 years, interesting trends in material technology will help to solve many fitting problems. Things that come to mind are 3D-printed metals and composites, which will help optimize the design and weight of prosthetic and orthotic (P&O) devices and ‘smart materials’ that change properties according to some control stimulus.

“Misuse of technologies that have not even been invented yet may result in the need for P&O interventions. Today, if we think about how the overuse of devices such as smartphones and tablets may cause neck injuries, we can quickly deduce that there will be a need in the future to improve the ergonomics of these devices, potentially even adopt some P&O-related approaches. It is conceivable that there will be more direct human-machine interfaces that do not depend on manual input or even vision. One possible harbinger of that future is the concept of smart glasses that have monitors integrated to become part of the user’s field of vision and that allow for ‘enhanced reality’ and other applications. In our program, we are currently using that technology in one of our research projects, where we generate real-time visual feedback for gait retraining in prosthesis users and we envision using it for other purposes in the future.

“Today there is a large unaddressed need globally for P&O professionals. In fact, the World Health Organization estimates a gap of 20,000 P&O professionals worldwide. During the next five decades, it is imperative that we conduct and disseminate research that investigates the associated challenges and possible solutions for improving access to P&O professionals. The development and adaptation of versatile technology, such as 3D printing and telehealth applications, will also help provide P&O services to remote and underserved regions of the world. Some believe that donations of materials and labor by western P&O professionals will help address the needs of those countries. For sustainable effects and a path to self-sufficiency, education is the key, and long-established training programs are in a good position to contribute their pertinent experience to that effort.

“As the profession becomes more and more knowledge based and less dependent on manual skills, more theoretical training and research experience will be required of students. This may result in a transition to an entry-level doctoral degree. While these developments can be foreseen, it is ultimately up to the governing bodies of the profession to mandate new standards. The Pitt P&O program is represented in the respective decision-making processes and is well positioned to take a leading role if and when changes to the training requirements are being instituted. There is already historic precedent for this, as the Pitt MSPO program was started in 2009 in response to the then-new transition to the Master as entry-level degree. We became one of the first programs in the country to adhere to the new standards.

“Fifty years from now I predict we will continue to be at the forefront of P&O education.”





NEW ROLES FOR A NEW GENERATION OF PAs.

For more than 50 years, physician assistants (PAs) have been improving access to health care. With expert knowledge and a personalized approach to care, they serve as a vital link between patients and their primary care physicians and medical specialists.

Today, as health care moves out into the community, the roles of these valuable professionals are expanding—and evolving.

According to Emily Murphy, assistant professor, Physician Assistant Studies (PAS) department, the boom in technology with smartphones and apps has led to a rapid expansion of PAs working in the field of telemedicine.

“More and more of our graduates work in community hospitals and use telemedicine to treat certain patients,” says Murphy.

“They can wheel the telemedicine technology into a room and be part of a team that actually ‘sees’ the patient in his home,” she continues. “Depending on the diagnosis, the PA can either treat the condition by prescribing medication or refer the patient to a specialist.”

While telemedicine can improve the quality of care for patients who live in rural settings, it is also being used to treat busy young professionals in our largest urban areas.

Shane Jordan (BA/BS '12, MS '15) currently works in New York City as a PA with Eden Health.

“Eden Health is actually a benefit that employers provide to their employees,” explains Jordan. “It’s a relatively new idea in that we not only offer primary care and urgent care, but also make referrals and help patients with insurance navigation.”

Jordan spends a few days a week in a brick-and-mortar clinic, and the other days offering virtual care through the Eden Health app. “Telehealth is great because you can easily check in on your patient and ask how he or she is feeling, if that rash has cleared up, or if they need any follow-up care,” he explains.

Jordan and other PAs at Eden Health also see patients at pop-up clinics in their workplace. Patients can stop in for check-ups or flu shots, get their blood pressure taken or blood work done.

“We have a very high engagement rate,” says Jordan. “Approximately 64 percent of employees in our companies use our services every year.”

He adds that many younger employees, those in their 20s or 30s who might not typically seek medical care, take advantage of the telemedicine app or on-site clinics.

“It is absolutely exciting to see the role of the PA changing in this way,” says Jordan. “We’re not only filling the gaps in primary care but contributing to the wellness of the general population.”

Murphy notes that telemedicine is an area of growth for future PAs. “Right now, some of our students do a clinical rotation in telemedicine with UPMC AnywhereCare. During the rotation, students might be required to be ‘on call’ with their PA preceptor and provide a virtual video visit with patients.”

David Beck, assistant professor and PAS program director, envisions PAs becoming more involved in telemedicine and other advanced models of care. To ensure that new PAs are well prepared, he says, the Pitt curriculum is becoming even more interactive and interpersonal.

“We strive to build strong clinical thinking skills and incorporate standardized patients into our training program whenever possible,” says Beck. “A standardized patient is someone who has been trained to portray a patient in a medical situation. By working with these patients, our students grow more confident in their skills.”

“No matter what the future holds, we know our PAs will graduate ready to hit the ground running.”



VIEW FROM THE FIELD.

By Kathryn Reed (BS '14, MS '16)

“Over the last three years, the most visible change in my profession has been the significant emphasis on mental health care. This has increased public visibility, as well as the amount of available funding and resources. Personally, I have witnessed more patient-initiated dialogue regarding mental health. My hope is that practitioners and patients will continue to diligently work toward dismantling the stigma surrounding mental health care, while focusing on improving equal access to the increased funding and resources.

“As the health care field continues to adjust and grow to meet patient care needs, PAs will continue to be a vital part of increasing access to quality care, whether through mental health or telemedicine.

“There is much discussion occurring among PAs regarding terminal degree adjustments, online program creation, name change and challenges with upward mobility. Over time, these conversations will inevitably lead to shifts in PA education and policies. Although I cannot predict what the profession will look like in the future, I am optimistic and excited to participate in the conversation.

“I’d like to remind PAs and PA students to take breaks and breathe. Remember to check in with your physical and mental health and be sure to reach out for help if you need it!”



Reed is a physician assistant in Behavioral Health at the Veterans Affairs Hospital in Pittsburgh. She recently founded the National Society of Black Physician Assistants in order to create a culturally responsible PA workforce that reflects the diversity found in our world.

Student News

Communication Science and Disorders



Students in the SLP and AuD programs hosted a Hearing Health Fair at Pitt's Community Engagement Center in Homewood earlier this year. Students offered hearing screenings and information about hearing health and wellness.

The Communication Science and Disorders' National Student Speech Language Hearing Association (NSSLHA) chapter once again earned Gold Chapter Honors as determined by the NSSLHA Executive Council.

Cara Donohue, PhD student, received a scholarship from the National Center for Adaptive Neurotechnologies to attend the highly competitive NIH-sponsored course in Adaptive Neurotechnologies in Albany, N.Y., July 8–26, 2019.

Ashley Medefindt, AuD student, was selected to be a National Student Speech Language Hearing Association (NSSLHA) student state officer representing Pennsylvania. NSSLHA is the national student organization for pre-professionals studying communication sciences and disorders that is recognized by the American Speech-Language-Hearing Association.

Leslie Zhen, CSD doctoral student, received one of two VA Young Investigator Awards and presented at the 2019 VA Pittsburgh Research Week Kick-off Ceremony on May 13, 2019. As part of this award, Leslie presented findings from the research he is conducting in the GRECC Hearing Lab in the VA Pittsburgh Healthcare System under the direction of Dr. Sheila Pratt, CSD professor. His presentation, "Relating brain injury to cognitive and language-processing abilities in blast-exposed veterans," summarized some preliminary findings from a VA RR&D-funded multisite study investigating the hearing complaints of veterans with histories of blast exposure.



Suzanne Feinstein, Jennifer Gates, Emilie Gazzero, Jihyun Jung, and Christine Lepore, SLP students, participated in the ICAN Talk AAC

(Augmentative and Alternative Communication) Summer Camp in Pittsburgh, June 26–28, 2019. The camp, organized by **Dr. Katya Hill**, CSD associate professor, offers children and young adults opportunities to engage in communication activities using their speech-generating devices.

AuD students **Hannah Famili** and **Leila Oyekola** were accepted as Schweitzer Fellows for 2019–2020. They will use this opportunity to apply their audiology training working with mostly elderly immigrant populations in Pittsburgh.

Occupational Therapy

Rachelle Brick, PhD student, received funding from the University of Texas Medical Branch (UTMB) Large Data Set Analysis P2C Program to travel to UTMB as a visiting scholar.



OTD and PhD students, along with Associate Professor **Roxanna Bendixen**, participated in the Muscular Dystrophy Association Walk on May 18, 2019. And OTD

students **Indira Mukerji, Sarah Newborn, Nicole Saba, and Taylor Wellman** raised funds for and participated in the Walk for Children's on June 1, 2019. Also on June 1, OTD students **Desiree Bodziony, Alyssa Carson, Shelby Cartwright, Danielle Hall, Lina Huynh, Emily Krut, Sara Lessem, Elissa Lichtman, Gabriella Mazzeo, Tori Merritt, Claire Payne, Emily Pullman, Spencer Sutter, and Melissa Toth** along with **Denise Chisholm**, professor, participated in the Walk to Cure Arthritis.

Caroline Drake, Lauren Kenney, Tessa Marthaler, Natalie Silverman, and Julia Vellky, OTD students, volunteered at the National Down Syndrome Congress held in Pittsburgh June 27–30, 2019.

Monica Morrison, OTD student, received a Pennsylvania Occupational Therapy Association (POTA) Academic Scholarship.

Physical Therapy



Bailey Petersen and **Stephanie Rigot**, DPT-PhD in Bioengineering students, were awarded F-30 Individual Pre-doctoral NRSA Fellowships from the NIH for their research projects.



The University of Pittsburgh was named as one of the top two fundraising schools for the 2018–2019 Pitt-Marquette Challenge, raising funds to support research grants and scholarships through the Foundation for Physical Therapy Research. Out of more than 150 schools, Pitt Physical therapy students earned second place behind Virginia Commonwealth University.



Anna Bailes, DPT-PhD in Bioengineering student, received the Best Rehabilitation Research award in the Pre-Doctoral Category for the 2019 UPMC Rehabilitation Institute Research Day. Working with other researchers, Bailes presented “Depression and anxiety are associated with increased health care utilization in low back pain.”



Nicole Mikologic and **Rachel Divas**, DPT students, won student APTA memberships thanks to Pitt alumnus Michael Gans (DPT '06). Gans has consistently donated two

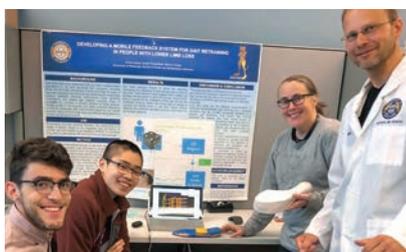
student memberships each year to promote professionalism within the Pitt PT academic community. Students earned entries for the membership drawing by participating in community service and professional development activities throughout the 2018–2019 academic year.

Physician Assistant Studies



Physician Assistant Studies student **Wei Qian** represented SHRS during OpenStreetsPGH at the Homewood Community Engagement Center where he handed out pedometers and information to participants. OpenStreetsPGH promotes healthy outdoor activity and community engagement using city streets.

Rehabilitation Science and Technology



Doctoral candidate **Krista Kutina**, her advisor **Dr. Goeran Fiedler** Prosthetics and Orthotics assistant professor, and co-investigators were awarded a Pitt

Chancellor's Seed grant for their project to test the efficacy of a gait retraining program.

Faculty News

The School of Health and Rehabilitation Sciences recognizes the following faculty who have received promotions: **Dr. Erin Lundblom**, associate professor, Department of Communication Science and Disorders; **Dr. Roxanna Bendixen**, associate professor, Department of Occupational Therapy; **Dr. Andrea Hergenroeder**, associate professor, Department of Physical Therapy; **Dr. Alicia Koontz**, professor, and **Dr. Mary Goldberg** and **Patricia Karg**, associate professors, Department of Rehabilitation Science and Technology; and **Drs. Amy Aggelou** and **Lori Cherok**, assistant professors, Department of Sports Medicine and Nutrition.

SHRS welcomes the following new faculty members: **Drs. Jason Boland**, **Nicole Corbin** and **Amanda Hampton Wray**, assistant professors, Department of Communication Science and Disorders; **Richard Joreitz**, assistant professor, Department of Physical Therapy; Assistant Professors **Rosa Fannie** and **Christine Rodgers**, Physician Assistant Studies Department; **Dr. Laura Dietz**, associate professor, and **Channing Moreland**, assistant professor, Department of Rehabilitation Science and Technology; and **Dr. Michelle Vamell**, assistant professor, Department of Sports Medicine and Nutrition.



Dr. Bambang Parmanto

has been named chair of the Department of Health Information Management. Parmanto has spent the last 23 years as a faculty member in the department.



Professors **Jennifer Brach**, Physical Therapy, and **David Brienza**, Rehabilitation Science and Technology, were named

SHRS associate deans of Faculty Affairs and Development and Technology and Innovation, respectively.

Communication Science and Disorders



Dr. Ellen Cohn, professor, delivered an invited, keynote address, “Telerehabilitation in 2019: Influencers, Challenges, Research Trends and Research Needs,” at the University of Kentucky College of Health Sciences’ College Research Retreat on Telerehabilitation, Lexington, Ky., May 6, 2019.



This summer, **Dr. Janice Vance**, assistant professor, introduced a new undergraduate study abroad program designed to facilitate interprofessional learning across pre-health, rehabilitation and education. In collaboration with Dr. Barbara McDade and her colleagues at Stranmillis University College, Belfast, the program offers students an opportunity to explore topics including early years policy and practice in education, community engagement, and inclusion and equity for special needs, vulnerable, and traumatized children. Students from SHRS undergraduate programs in Communication Science, Rehabilitation Science and Clinical Dietetics and Nutrition participated. Students from other disciplines (psychology, education, social work) who have an interest in early child development will be welcome to participate, expanding the opportunities for meaningful interprofessional learning across Pitt’s undergraduate population.



Sheila Pratt, CSD professor and hearing researcher at the VA Pittsburgh Healthcare System, was selected as a member of the ASHA Health Care Economics Committee for a three-year term beginning January 1, 2020.



William Evans, assistant professor, received a UPMC Health System Competitive Medical Research Funding award for his project “Examining Mechanisms of Learning and Treatment Generalization in Aphasia Rehabilitation Using Open-source Flashcard Software.”



Bharath Chandrasekaran, CSD professor and vice chair for Research, received the second phase of a Defense Advanced Research Projects Agency (DARPA) award to fund his “Peripheral Nerve Stimulation to Facilitate Language Learning” project.

Drs. Patrick Doyle and **Michael Walsh Dickey**, associate professors, and **Will Hula**, adjunct faculty, and their team at the VA Pittsburgh received funding for their research on “Optimizing and understanding semantic feature analysis treatment for aphasia: A randomized controlled comparative-effectiveness trial.”



Dr. Nicole Corbin joined the Department of Communication Science and Disorders as assistant professor in Audiology. She was recruited from the University of North Carolina at Chapel Hill, where she completed a PhD. Corbin received her Doctor of Audiology with a specialization in pediatric audiology from Arizona State University in 2013. Her clinical, teaching and research interests are in the area of audiologic management of children with unilateral hearing loss (UHL).

Health Information Management

Dr. Bambang Parmanto, chair and professor, cofounded a company that will test new ways to treat sleep problems among members of the armed forces. The company has developed a software platform that can be used by sleep clinicians and people who have problems sleeping.

Nutrition and Dietetics



Assistant Professor **Judy Dodd** was recently recognized with the Retail Dietitians

Business Alliance Jane Andrews Lifetime Achievement Award in Retail Dietetics, honoring her decades of work in helping people live healthy lives.

Occupational Therapy



Dr. Roxanna Bendixen, associate professor, was inducted into the American Association of Occupational Therapy Roster of Fellows, American Occupational Therapy Association (AOTA) Annual Conference

& Expo, New Orleans, La., April 6, 2019. Also in April, Bendixen presented at the 2019 Muscular Dystrophy Association Clinical and Scientific Conference in Orlando, Fla.



Dr. Angela Caldwell, assistant professor, was appointed an Associate Member of the Healthy Weight Research Network, solely dedicated to obesity prevention/management and health promotion for children with developmental disabilities.

Dr. Joan C. Rogers, professor emerita, was awarded the AOTF Leadership Service Commendation for her outstanding service and contributions of time, energy and support to fulfill AOTF’s mission, goals and objectives.



Kelsey Voltz was hired as a part-time instructor in the department. She will design and oversee the student experience at Pitt’s Community Engagement Center in

Homewood and will partner with OT faculty on select OTD courses and laboratories.

The following faculty presented at the 2019 AOTA Annual Conference & Expo in New Orleans last April: **Dr. Elizabeth Skidmore**, professor and chair; **Dr. Denise Chisholm**, professor; **Drs. Joanne Baird, Roxanna Bendixen, Natalie Leland, Lauren Terhorst, and Pamela Toto**, associate professors; **Drs. Angela Caldwell** and **Amit Sethi**, assistant professors; Instructors **Ann Marsico** and **Jennifer White**; and **Laura Waterstram**, senior researcher.

Dr. Natalie Leland, associate professor, presented at SLEEP Meeting, San Antonio, Texas; at Center on Health Services Training and Research 2019 Implementation Science Institute, Providence, R.I.; and at the NIA-sponsored Behavioral Insights to Improve Dementia Detection and Care meeting, Bethesda, Md.



Associate Professors **Natalie Leland, Lauren Terhorst** and others presented posters at the Alzheimer’s Association International Conference, Los Angeles, Calif.

Physical Therapy



Dr. James Irgang, professor and department chair, received the Lucy Blair Service Award at the American Physical Therapy Association's (APTA) 2019 NEXT Conference and Exposition in Chicago in June. The award honors physical therapist members whose contributions to APTA are of exceptional quality.



Dr. Jennifer Brach, professor, was recognized as a Catherine Worthingham Fellow of the American Physical Therapy Association in June at the 2019 NEXT Conference and Exhibition in Chicago. Brach was awarded the honor for her unwavering efforts to advance the profession for more than 15 years and her outstanding contributions to research with translation to the domains of practice and teaching.



Dr. Anthony Delitto, PT professor and SHRS dean, was appointed by the Secretary of the Department of Health and Human Services to be a member of the National Advisory Council for Complementary and Integrative Health at the NIH. He will serve a four-year term.



Dr. Patrick Sparto, associate professor, was elected to the Academy of Neurologic Physical Therapy (ANPT) Board of Directors as the director of Research. As the director, he will provide guidance on research topics and resources for all ANPT committee projects.



Assistant Professor **Victoria Homyak** received the 2019 Healthcare Professional Geriatrics Teacher of the Year Award. The award, which recognizes a health care professional who has made significant contributions to the education and training of learners in geriatrics, was presented in conjunction with the 2019 Clinical Update in Geriatric Medicine in Pittsburgh.

Rehabilitation Science and Technology



Rory Cooper, distinguished professor and SHRS associate dean for Inclusion, became the 28th inventor in the United States Patent and Trademark Office's Inventor Collectible Card series. Cooper's collectible card recognizes his vast portfolio of innovative research and inventions. Other noted inventors include Thomas Edison, Nikola Tesla and Steve Wozniak.

Alumni News

Athletic Training



Allison Ross (BS '19) and the District 2 Quiz Bowl Team placed as runners up in the National Athletic Trainers' Association National Quiz Bowl. Ross earned first place in the District 2 Quiz Bowl, enabling her to compete in the national event.

Communication Science and Disorders

Craig Coleman (BA '98, MA '00) was elected vice president for Planning on the American Speech-Language-Hearing Association Board of Directors.

Shannon Powell (CSD '01) received the Federal Woman's Achievement Award at the Oscar G. Johnson VA Medical Center at Iron Mountain, Mich. where she serves as an audiologist.

Dr. Amanda Ortmann (PhD '12) was appointed director, Audiology Studies, in the Program in Audiology and Communication Sciences at Washington University, St. Louis, Mo.

Devon Weist (BA '02, MA '04, AuD '06) and Lindsey Jorgensen (MA '07, AuD '08, PhD '12) were elected to the 2019 American Academy of Audiology Board of Directors.

Health Information Management

Justin Klimchak (BS '15) recently received his Doctor of Optometry degree from The Ohio State University College of Optometry. He now works for Visionworks at their Cranberry Township, Pa. location.

Nutrition and Dietetics

Roxanne N. Villanueva (BS '95) joined the ranks of fellow of the Academy of Nutrition and Dietetics. She serves as a clinical dietitian manager for Select Specialty Hospital – Cleveland Gateway.

Occupational Therapy

Kaitlin Debar (MOT '16) received the Pitt OT Award of Appreciation for supporting the advancement of occupational therapy through community-based pediatric research.



Sudong Kang (MOT '11) graduated from the post-professional Doctor of Occupational Therapy (OTD) Program at Salus University with a specialization in Low Vision Rehabilitation in July 2019.

Katelyn Kelly (MOT '13) received the Pitt OT Excellence in Clinical/Community Educator Award for excellence in fostering high-quality training in pediatric rehabilitation.

Emily Kringle (PhD '19) was hired as Postdoctoral Research Associate, Department of Occupational Therapy, University of Illinois at Chicago.

Stacy Sue Rosello (BS '93) received an Emerging & Innovative Practice Award at the 2019 AOTA Annual Conference & Expo for defining excellence and leadership in family-centered practice.

Dr. Minmei Shih (MS '04) received the Pitt OT Alumni Award of Excellence for advancing neurorehabilitation.

Chao-Yi Wu (PhD '19) was hired as postdoctoral scholar, Oregon Center for Aging and Technology, Oregon Health & Science University.

Physical Therapy



Alia Alghwiri (MS '08, PhD '11) received the World Confederation for Physical Therapy's Outstanding Platform Presentation Award by an Early Career Researcher for her work titled "The effect of stem cell therapy and combined exercise program on balance and gait." The meeting was held in Geneva, Switzerland.

Physician Assistant Studies



Mekayla Heinzmann (PAS '18) was selected for the UPMC Advanced Practice Provider Neonatology Fellowship. This training will advance her medical knowledge, critical thinking and procedure skills in neonatal critical care and newborn medicine through a mix of instructional sessions, clinical rotations, skills training via simulation and hands-on experience with the UPMC Newborn Medicine Program.

While working as a paramedic on Mother's Day, Emergency Medicine and Physician Assistant Studies alumnus **Amy Mulcahy** (EM '14, PAS '18) provided lifesaving care to the newborn of a mother who gave birth en route to the hospital.

Department News

Communication Science and Disorders



The 8th Biennial Audiology Teaching Conference was held this summer at the University of Pittsburgh. SHRS audiology faculty hosted faculty and clinical instructors from across the country who discussed best practices in teaching. This year's topic was "Teaching Vestibular Assessment and Rehabilitation Across the Lifespan in the Classroom and Clinic." The keynote speaker was Dr. Richard Gans, American Institute of Balance, and the moderator was Dr. Devin McCaslin, Mayo Clinic.



The CSD Department kicked off its first Brain and Communication Undergraduate Research Experience (BrainCure) program. This program provides an interdisciplinary cohort of students with an opportunity to learn about the neuroscience of communication, receive exposure to human and animal neuroscience research methods, and work on a research project with their faculty mentor.

Health Information Management

A new Master of Science in Health Informatics (MSHI) degree is now being offered through the HIM Department to address the growing need for professionals who can use data to improve quality of care. Students may elect to complete the degree on campus or online. The MSHI is SHRS's first online degree offering.

Physician Assistant Studies

Physician Assistant Studies has been elevated from a program to a department in the School of Health and Rehabilitation Sciences.

OCTOBER

Friday–Saturday, October 18–19, 2019

Pennsylvania Occupational Therapy Association Annual Conference, *King of Prussia, Pa.*

Sunday, October 27, 2019

Nutrition and Dietetics Alumni Reception, *City Tap House, Logan Square, 100 N. 18th Street, Philadelphia, Pa., 7–9 p.m. Held in conjunction with the Food & Nutrition Conference & Expo. Email Emily Mente, senior alumni relations associate, emm191@pitt.edu.*

NOVEMBER

Saturday, November 2, 2019

SHRS Fall Open House, *William Pitt Union, University of Pittsburgh, 10 a.m.–12:30 p.m. For information, contact Nicole Skellie, Recruitment manager, 412-383-6556, skellienny@pitt.edu.*

Monday, November 18, 2019

School of Health and Rehabilitation Sciences Alumni Reception, *location and time TBA, Dubai, United Arab Emirates. Email Emily Mente, senior alumni relations associate, emm191@pitt.edu.*

Friday, November 22, 2019

Department of Communication Science and Disorders Alumni Event, *location and time TBA, Orlando, Fla. Held in conjunction with the American Speech-Language-Hearing Association Annual Convention. Email Emily Mente, senior alumni relations associate, emm191@pitt.edu.*

FEBRUARY

Thursday, February 13, 2020

Department of Physical Therapy Alumni Reception, *location and time TBA, Denver, Colo. Held in conjunction with the American Physical Therapy Association Combined Sections Meeting.*

MARCH

Thursday–Sunday, March 26–29, 2020

American Occupational Therapy Association Annual Conference & Expo, *Boston, Mass. Alumni Reception, time, date and location TBA. Email Emily Mente, senior alumni relations associate, emm191@pitt.edu.*

APRIL

Wednesday–Saturday, April 1–4, 2020

HearTECH Expo, *New Orleans, La. Alumni Reception, time, date and location TBA. Email Emily Mente, senior alumni relations associate, emm191@pitt.edu.*

MAY

Friday–Saturday, May 8–9, 2020

SHRS 50th Anniversary Celebration. *For details, see the FACETS back cover. Hope to see you at Pitt for this special occasion!*

Change Service Requested

SAVE THE DATE!

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School of Health and Rehabilitation Sciences
May 8-9, 2020



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