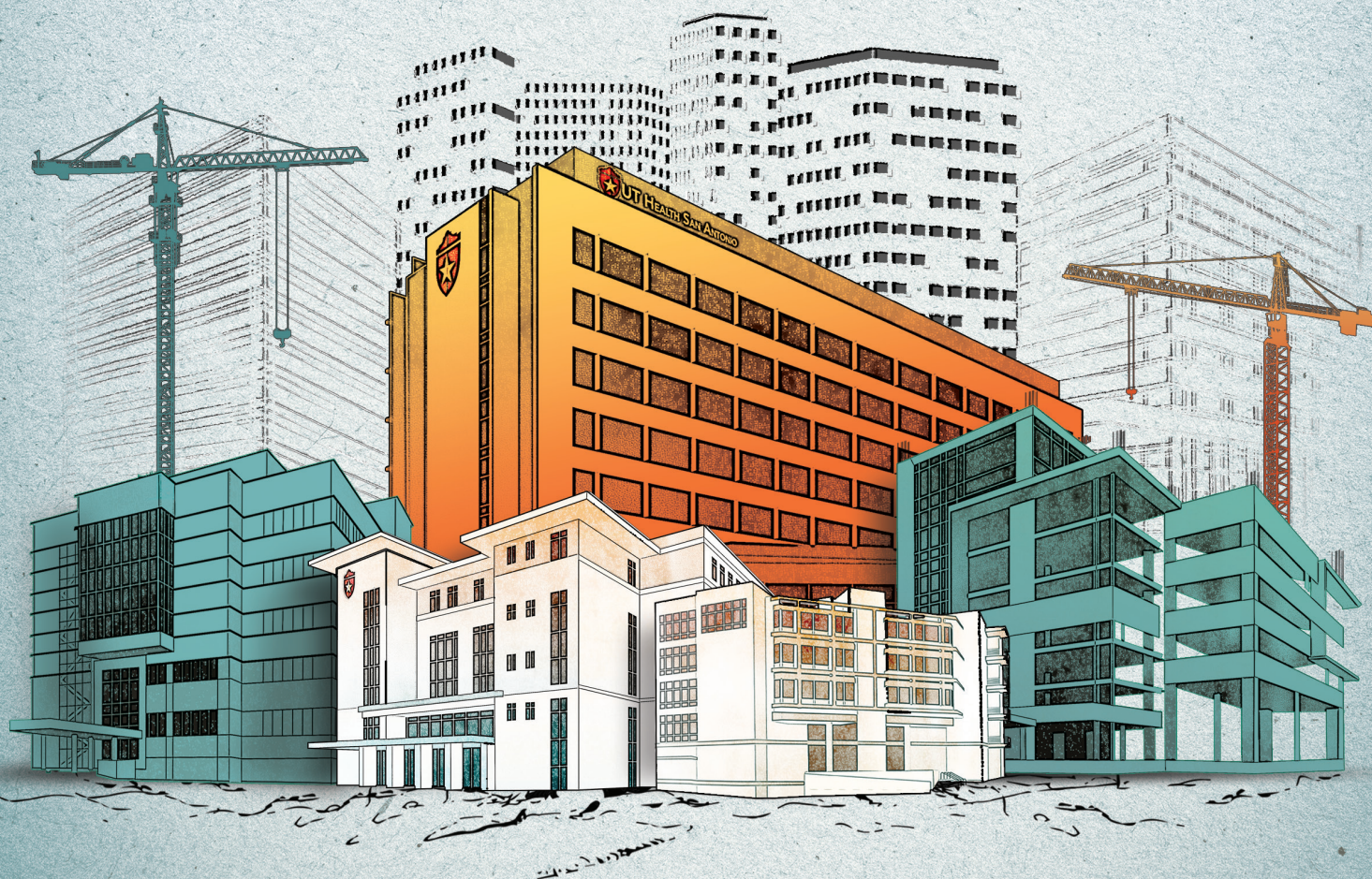


MISSION

Growing into your future

\$1 billion in medical research and patient care expansions will drive health care innovation for Texas' growing population and economy



UT Health
San Antonio

OUR TRUE VALUE

How should you measure the impact of a complex, fast-growing academic medical center with expanding missions of patient care and cutting-edge biomedical research?

During the next 48 months, UT Health San Antonio is planning more than \$1 billion in capital investments. This new infrastructure includes our first inpatient hospital, which will deliver specialty surgeries and, eventually, advanced cancer care, adding to the 2.6 million patient visits each year across our dozens of outpatient physician and dental practice locations.

Our Center for Brain Health will bring under one roof the institution’s many brain health experts and initiatives to serve the growing need for neurological care in the region and advance understanding of the wide array of neurodegenerative diseases, movement disorders and mental health concerns.

And a new lab facility, Science One, will provide dedicated space for clinical trials and research on the diseases that impact our community most: cancer, dementia, diabetes and age-related chronic conditions.

Each year, our academic enterprise produces more than 200 physicians, 130 scientists, 400 nurses, 100 dentists and 560 health professionals — more than half of whom add to the health care workforce right here in South Texas.

While our institution is transforming — quickly — on many fronts, what remains constant at the granular level across our missions of education, research, patient care and community engagement is our motivation to improve human health. Therein is our true value.

The stories that follow bear witness not only to the tireless commitment of our scientists to find cures for disease and the dedication of our faculty to train and mentor the next generation of compassionate health care providers, but also to what propels each of us forward every day: finding ways to make lives better.

Robert Hromas

Robert Hromas, MD, FACP
Acting President
UT Health San Antonio



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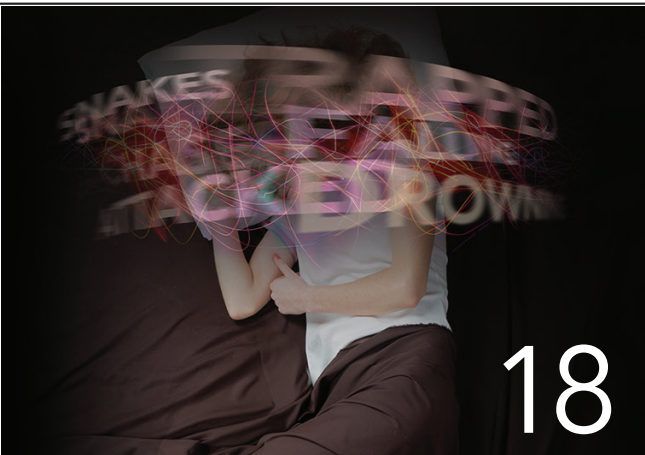


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ON THE COVER

With \$1 billion in infrastructure expansions underway, UT Health San Antonio is on a historic growth trajectory, shaping the future of health care for the region and positioning the institution as an essential force for improving human health for generations to come.



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UTSA TO MERGE WITH UT HEALTH SAN ANTONIO

The University of Texas System Board of Regents in August authorized the integration of The University of Texas Health Science Center at San Antonio and The University of Texas at San Antonio to create one unified institution by 2025. The regents also unanimously voted to name UTSA President Taylor Eighmy as its president once the combined institution is approved by accrediting entities.

“Great cities and great universities make each other better. It is time to marshal the talent, size and scale of UTSA and UT Health San Antonio to multiply their roles as global leaders in education, health care and innovation,” said Board of Regents Chairman Kevin P. Eltife. “By bringing together all of their complementary and unique strengths, we will give Texans access to the best education, discoveries and health care imaginable, while accelerating the university’s trajectory as a top U.S. and global university.”

Key to the plan was the decision to fully leverage the individual contributions of UT Health San Antonio and UTSA. UT Health San Antonio, the largest academic health research institution in South Texas, ranks in the top 3% globally for National Institutes of Health funding. UTSA, a top-tier (Carnegie R1) research institution, educates 35,000 students across seven colleges and interdisciplinary schools.

According to the U.S. Census Bureau’s most recent data, San Antonio, the nation’s seventh-largest city and the second largest in Texas, added nearly 22,000 new residents between July 2022 and July 2023 — more than any other city in the U.S. As a critical gateway to South Texas, which is home to 5.5 million people and projected to grow to 6.1 million by 2040, San Antonio’s global influence continues to expand.

James C. “Rad” Weaver of San Antonio, vice chairman of the Board of Regents, said the decision was one of the most

important transformational steps the two UT institutions will take together for the long-term benefit of the city and state.

“This merger is the catalyst that will supercharge our region as a national leader in learning, innovation, health and economic vigor,” Weaver said.

To ensure a smooth transition, Eighmy and Robert Hromas, MD, FACP, acting president of UT Health San Antonio, will tap the expertise of faculty, researchers and administrators who will serve on transition teams and working groups to ensure accreditation and other approvals, as well as streamlined, timely, strategic processes to operationalize the university.

“The impact of a unified presence is undeniable, and Texas will benefit immensely from this integration, which among many benefits, will enable greater public impact and enhanced global competitiveness,” said UT System Chancellor James B. Milliken. “This initiative is about expanding and growing to align with the needs of the region and state, and to maximize the potential of two UT institutions that exist only miles apart.”

The combined institution would become the third-largest research university in Texas, with annual research expenditures nearing \$470 million, encompassing six federally funded research and development centers.

UT System officials said it will be poised to achieve new heights in securing research funding, forging industry and government partnerships, attracting philanthropic investments and pioneering groundbreaking innovations. It will also draw top-tier faculty, staff, students, researchers and health care professionals from around the world.



School of Dentistry adds to academic, research impact

Since its launch in 2023, the UT Health San Antonio School of Dentistry’s Dental Hygiene program at UT Education and Research Center at Laredo (UT Center at Laredo) has kept pace with its goal to admit eight more students this past July at the start of its second year of offering the degree program.

The Bachelor of Science in Dental Hygiene degree program is the first of its kind in Laredo,

aimed at addressing significant gaps in oral health care needs within the community while boosting local job opportunities in a high-demand field. The dental hygiene courses at the center are taught live and through distance learning by UT Health San Antonio School of Dentistry faculty, and in-person dental hygiene faculty teach at the new simulation and radiology labs there and at community clinics where students also get practical experience.

In addition to broadening its academic reach, the School of Dentistry continues to expand its research focus with the launch of its Center for Global and Community Oral Health in September 2023. The center brings together various outreach and research programs under one umbrella to study and develop solutions to the most pressing dental challenges facing global populations today.

This fall, the school launched its Center for Regenerative Sciences, a new research initiative to position the university at the forefront of regenerative dentistry and medicine, with a focus on the development of advanced tissue regeneration strategies.

First graduates of dual degree in medicine and AI

At the university’s May 2024 commencement, fourth-year medical students Aaron Fanous and Eri Osta became the first graduates of the nation’s first dual degree program in medicine and artificial intelligence. The MD/MSAI dual degree program, which officially launched in fall 2023, combines a Doctor of Medicine degree from The University of Texas Health Science Center at San Antonio’s Joe R. and Teresa Lozano Long School of Medicine and a Master of Science in

Artificial Intelligence from The University of Texas at San Antonio.

AI’s presence is already evident in customized patient treatment plans, robotic surgeries and drug dosage. The aim of the five-year program is to enable physicians to lead in the practical use of artificial intelligence to improve diagnostic and treatment outcomes and to prepare students for next-generation AI and its impacts on the future of health care research, education, industry and administration.

Science One bolsters research profile

Plans to commence construction of a new lab facility this fall will significantly expand the university’s footprint, bolster its already robust research profile and provide new learning opportunities for students within the Graduate School of Biomedical Sciences and beyond.

The \$100 million Science One building is part of a massive expansion of the university’s research and patient care missions. The five-story, 95,500-square-foot building will house laboratory space dedicated to researching the diseases that impact the community most.

“UT Health San Antonio is renowned for world-class research in cancer, dementia, aging and diabetes, and we will put experts from each of these diseases in our Science One building,” said Robert Hromas, MD, FACP, acting president of UT Health San Antonio.

“This new facility will allow our experts to share techniques, fostering new ideas that will lead to innovative breakthroughs that will not only provide economic development for San Antonio and South Texas, but also better health care for patients suffering from these diseases.”

Construction is projected to complete in August 2026.





NeuroRecovery Research Lab opens

This past June, the School of Health Professions celebrated the official opening of its NeuroRecovery Research Lab dedicated to spinal cord injury rehabilitation research. The lab is housed in the school’s rehabilitation services clinical space at the Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center.

The lab’s centerpiece, the PowerStep, is a computerized body weight-supporting treadmill system that enables hands-on, activity-based therapy interventions. Data collected during therapy sessions on the system are shared with other researchers of the NeuroRecovery Network, an international group of rehabilitation centers that develop and provide therapies to improve functional recovery and health among people living with paralysis.

Therapies on the PowerStep include step retraining, step adaptability, segmental trunk control drills, coordination activities and anticipatory balance activities. Patients receive a full ensemble of sensory facilitation, which enables motor recovery in an environment in which they feel safe. The treadmill’s harness removes patients’ fear of falling, enabling them to participate in interventions to regain motor control.

Nurse anesthetist program welcomes first students

To help fill critical demands for anesthesia services, the university’s School of Nursing welcomed its inaugural cohort of 18 students this fall into its newly launched Bachelor of Science in Nursing to Doctor of Nursing Practice-Nurse Anesthesia program.

The three-year, full-time, first-of-its-kind program for South Texas will provide students with the skills and knowledge to offer safe and individualized anesthesia care across all age groups. At the conclusion of the program and after passage of the nurse anesthesia certification exam, these Certified Registered Nurse Anesthetists (CRNA) can work with various medical practitioners providing all types of anesthesia services, including sedation, general and regional anesthesia and pain management.

Currently, there are only four CRNA programs in Texas, with the next-closest programs located in Dallas-Fort Worth and in Houston.

COMMUNITY-INSPIRED CURRICULUM

The University of Texas School of Public Health San Antonio, the university’s sixth and newest school, welcomed its first cohort of students this fall to enter the school’s inaugural degree program — a Master of Public Health in Public Health Practice and Administration. See page 22 to learn more about the school and its vision and curriculum focus.



BUILDING HEALTH CARE TRANSFORMATION

UT Health San Antonio is in the midst of significant transformation, evolving from a premier provider of outpatient care to an integrated health care delivery system that will soon include inpatient services at the UT Health San Antonio Multispecialty and Research Hospital, opening this December.

The new hospital will enhance the institution’s continuum of care, allowing for better integration and alignment with established outpatient programs, such as Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center. This evolution of care is driven in large part by the rapid growth in health care demands within the surrounding community.

Part of the \$1 billion in capital

investments in support of UT Health San Antonio patient care expansion over the next several years is construction of a \$100 million Center for Brain Health. The new facility, which will connect by an enclosed corridor to the UT Health Medical Arts and Research Center, will advance comprehensive brain health research and provide innovative expert care for patients with a wide variety of neurodegenerative diseases, movement disorders and complex neurologic conditions.

With a projected opening of December 2025, the facility will also provide a home to the institution’s many brain health experts and initiatives that serve the growing need for neurological care in the region.

Among them: the Glenn Biggs Institute for Alzheimer’s and Neurodegenerative Diseases.

According to Sudha Seshadri, MD, professor of neurology and founding director of the Biggs Institute, the center’s research efforts will benefit from significant recruitment of Hispanics into clinical trials, expanding the nation’s understanding of how brain-related diseases specifically affect what is already the predominant population demographic across South Texas.

The center will also serve as a training venue for medical residents and postgraduate trainees, ensuring the future of sustained neurological care for the community.

The Center for Brain Health will include:



75 exam rooms



50 faculty offices



12-chair non-oncology infusion center



Outpatient pharmacy



Dedicated space for research



A commitment to substance use treatment

In April 2023, UT Health San Antonio celebrated the grand opening of the 20,000-square-foot Be Well Texas facility, a hub for providing substance use treatment services across the state, where one in 10 people have a substance use disorder but not everyone has the same access to care.

Be Well Texas offers comprehensive treatment and recovery support for substance use and mental health services, regardless of ability to pay. In addition to its in-person and statewide telehealth clinical operation, the program coordinates a network of providers treating for opioid and other substance use and providing recovery support services. It brings together addiction medicine specialists, behavioral health experts, researchers and staff members with lived experience in addiction recovery to collaborate and expand access

to care statewide.

“We started these programs to provide equitable access to compassionate, evidence-based programs for substance use disorder and people who are using substances,” said Jennifer Sharpe Potter, PhD, MPH, executive director of Be Well Texas.

Potter is also UT Health San Antonio’s vice president for research and founding director of its Be Well Institute on Substance Use and Related Disorders, a pioneering initiative established earlier this year as a center of excellence with national scope for research, clinical and public health programs, and education and community engagement to advance the field addressing addiction and related conditions. It is home to Be Well Texas.

The institute marks a significant milestone in UT Health San Antonio’s commitment

to addressing the complex challenges posed by substance use. With more than \$50 million in National Institutes of Health, state and other federal funding annually, the Be Well Institute works as a highly integrated and collaborative center across the university and represents a comprehensive framework and programming for advancing the understanding and treatment of substance use disorders.

With support from the National Institute on Drug Abuse Clinical Trials Network and other federal funding, the work of the institute encompasses research, medical interventions and evidence-based treatments, psychological therapies, social and peer support, counseling on lifestyle changes, follow-up care, and provider training and education as well as many community outreach and educational initiatives.

UT Health San Antonio faculty are likewise at the forefront of addressing substance use issues statewide, including establishing treatment networks, workforce development initiatives and distribution of life-saving naloxone to traditional and non-traditional first responders.

Collectively, what is available at UT Health San Antonio is unique in Texas and ready to be expanded nationally, said Potter.

“The launch of the Be Well Institute heralds a new era of collaboration and innovation in the field of substance use research and care,” she said. “Stakeholders from across the academic, health care and public sectors are encouraged to join us in this vital endeavor as we strive to improve the lives of individuals and communities affected by substance use disorders.”

Better care through technology

Preparation for opening the new UT Health San Antonio Multispecialty and Research Hospital this December has included equipping the facility with technologies to enhance patient comfort and make care more efficient.

Among the advanced features found within will be beds that can reposition a patient without the assistance of a nurse and alert staff if a patient is at risk for falling or attempts to leave their bed.

Virtual nursing is another key feature of patient rooms, where each large-screen monitor serves not only as a television, but also has a microphone and camera so the patient can interact with care providers. Robots will also roam the hospital’s halls, delivering

bottled water, specimens to labs or medications from the pharmacy to nursing units.

Technology is even embedded within the Tom C. Frost Skybridge, completed earlier this year, allowing for lab samples to be delivered quickly and securely between the hospital and the Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center. The skybridge likewise provides a seamless and vital pathway for patients, providers and caregivers to move easily between facilities.



Serving dental patients with special needs

In February, UT Health San Antonio’s School of Dentistry opened its Phil and Karen Hunke Special Care Clinic to provide comprehensive dental care for adults and children with intellectual, developmental, cognitive or physical disabilities, and those with complex medical conditions.

The clinic was purposely designed for individuals with mobility challenges. From arrival to departure, patients and their caregivers find wide corridors outfitted with hand railings and wheelchair bumpers. Each treatment room features adjustable lighting, sound-dampening walls, large screens and sliding barn doors. A multi-sensory room known as the “Zen Den” offers patients a tranquil space to alleviate anxiety and take a break during treatment if needed.

In addition to the specific focus on patient comfort, the clinic provides opportunities for dental and dental hygiene students and residents to gain invaluable experience by rotating through the special care clinic. Under the guidance of experienced faculty members, students can learn firsthand how to tailor dental care to meet the unique needs of each patient.

Specialized continuing education programs are also being developed by the school for practicing dentists. The sessions will provide dentists with advanced techniques, best practices and strategies for addressing the unique needs of those with disabilities and medically complex conditions, enhancing their ability to deliver high-quality oral health care for all patients.

Newest outpatient location opens

In March, UT Health San Antonio opened its UT Health Outpatient and Surgery Center at Kyle Seale Parkway. The five-story, 108,000-square-foot community medical facility includes primary care and a range of specialty practices. Patients also have access to the latest in diagnostic laboratory testing and convenient imaging services. The location includes an ambulatory surgery center with state-of-the-art operating suites and spacious pre-op and recovery rooms. Learn more at UTHealthCare.org/KSP.





A LEADER IN RESEARCH FUNDING, OUTCOMES

The University of Texas Health Science Center at San Antonio is rated No. 6 among the 25 top-rising institutions in North America, according to *Nature Index*, a database of author affiliations and institutional relationships that tracks contributions to research articles published in high-quality natural science and health science journals.

The university is also a top-ranking academic research health center with regard to research funding. It received \$131.5 million in National Institutes of Health funding in fiscal year 2023, according to the Blue Ridge Institute for Medical Research, ranking No. 72 out of the 2,886 public and private institutions that received NIH funding — reflecting an increase in NIH funding of 31% over the previous fiscal year.

Also notable: \$16.4 million awarded in 2024 from the Cancer Prevention and Research Institute

of Texas for attracting top cancer researchers and advancing child and adolescent cancer research, including breakthrough discoveries by investigators from both the Mays Cancer Center at UT Health San Antonio, one of only four National Cancer Institute-designated Cancer Centers in Texas, and the Greehey Children's Cancer Research Institute, one of only two institutes in the U.S. dedicated solely to pediatric cancer research.

"At UT Health San Antonio, we are proud of our sustained growth and impactful contributions to the biosciences," said Jennifer Sharpe Potter, PhD, MPH, the institution's vice president for research. "Our commitment to innovative research has positioned us as a leader in addressing critical health challenges."

As the leading academic and bioscience research center in South

Texas, with an annual portfolio of \$413 million, and as a primary driver of San Antonio's \$44.1 billion health care and biosciences sector, UT Health San Antonio's research accomplishments include advances in the treatment of cancer, age-related diseases, Alzheimer's and other neurodegenerative diseases, infectious diseases, mental health, substance use disorders, metabolic diseases including diabetes, population and public health and military health.

The research highlights that follow provide a glimpse of the broad and impactful work of investigators from across the institution to discover and test new therapies, prevent and treat disease and preserve and improve health across the lifespan.

\$11 million NIH-funded study could lead to a first-ever oral chlamydia vaccine. Chlamydia is the most reported sexually transmitted disease and affects about 4 million people in the United States each year, according to the Centers for Disease Control and Prevention. While vaccines are available for other sexually transmitted infections, none exists for chlamydia. Untreated chlamydial infections can lead to severe complications including pelvic inflammatory disease, infertility and ectopic pregnancy. While investigating mouse-adapted

chlamydia, a team of researchers found that genital chlamydia that spread to the gastrointestinal tract established long-standing colonization. They then tested an oral inoculation of chlamydia to the GI system and found that it became not only non-pathogenic but also offered protective immunity against subsequent infection in other tissues including the genital tract and airways. This surprising finding led investigators to conclude that an oral delivery of chlamydia could serve as a vaccination against the infection, an important step toward development of a vaccine.



Clinical trial studies people with Down syndrome for potential Alzheimer's vaccine. Significant levels of amyloid beta plaques and tau tangles in the brain are classic hallmarks of Alzheimer's disease. Because people with Down syndrome have an extra copy of the 21st chromosome, which is

responsible for a protein that can cause plaques in the brain, their brain pathology mirrors that of a person with Alzheimer's. And their risk for developing the disease is three to five times higher than the general population. The Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases at



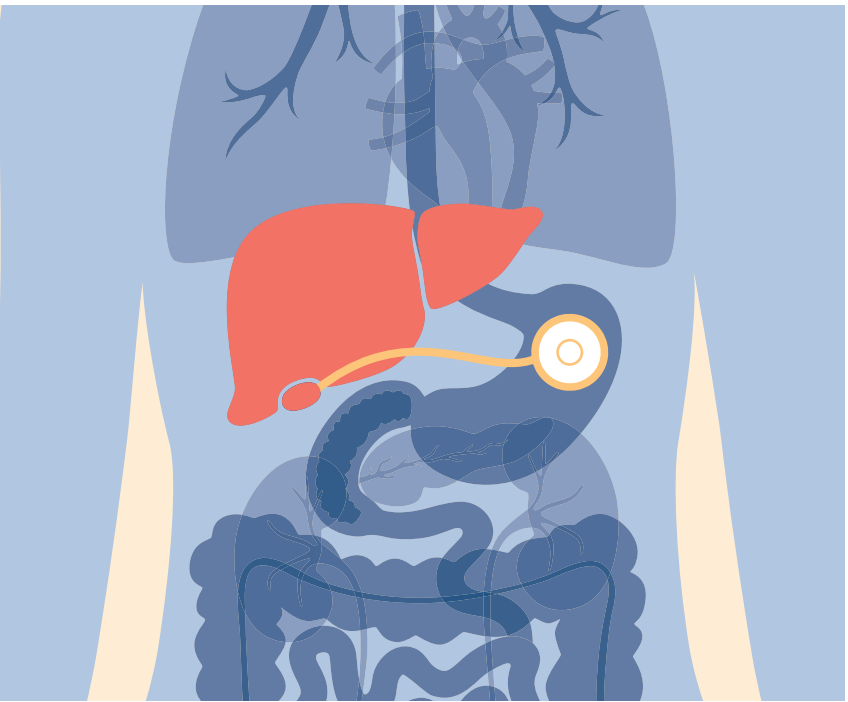
Scientists create first mouse model with functional human immune system. Mice are widely used in biological and biomedical research because they are small, easy to handle, share many immune elements and biological properties with humans and are easily genetically modified. Many of the more than 1,600 immune response mouse genes, however, are incongruent with their human equivalents, resulting in divergencies or deficiencies of mice as predictors of human immune responses. In a breakthrough for biomedical research that promises new insight into immunotherapy development and disease modeling, health science center scientists have created a humanized mouse model with a human immune system and a human-like gut microbiome capable of mounting specific antibody responses. This advancement brings new possibilities for developing human vaccines and human immune system studies of various diseases.

UT Health San Antonio is one of 14 clinical trial sites worldwide studying this underrepresented, high-risk group and reviewing a possible vaccine that would slow the progression of these plaques and of the disease to bring researchers one step closer to preventing Alzheimer's for everyone.



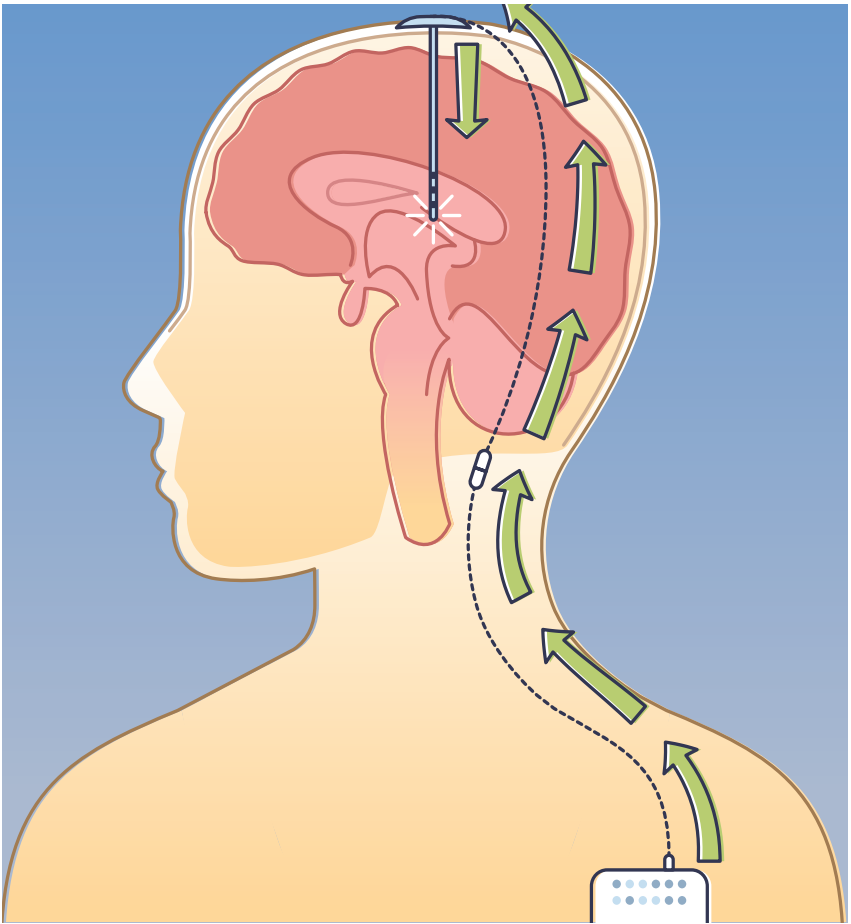
A long-term ketogenic diet accumulates aged cells in normal tissues. A strict “keto friendly” diet, popular for weight loss and diabetes, might not be all that friendly. The high-fat, low-carbohydrate diet leads to the generation of ketones, a type of chemical that the liver produces when it breaks down fats. While this improves certain health conditions, pro-inflammatory effects also have been reported. A study led by health science center researchers found that a continuous, long-term ketogenic diet may induce senescence — aged cells in normal tissues — with effects on heart and kidney function, in particular. According to the research, an intermittent ketogenic diet, with a planned keto break, did not exhibit any pro-inflammatory effects due to aged cells. The findings have significant clinical implications for the approximately 13 million Americans who follow a ketogenic diet.

Physical exercise affects male and female rats differently. Figuring out the “why” and “how” of the effects of physical exercise on the body is the goal of a 10-year, multimillion dollar project through the National Institutes of Health called the Molecular Transducers of Physical Activity Consortium. Researchers conducted thousands of analyses on 19 tissue types identifying changes in genes, proteins and metabolites and were surprised to find that all bodily tissues have some response to exercise training. Additionally, the exercise-response differences between male and female rats were greater than anticipated. For example, researchers found differences in most tissues sampled including brain, adrenal gland, lung and fat tissue. These findings could eventually play a role in how exercise interventions are recommended for men and women and could lead to specialized exercise routines being prescribed for various ailments or health conditions.



Chemotherapy ‘pump’ directly targets liver tumors. Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center, is currently one of only two facilities in Texas offering hepatic artery infusion, also known as HAI pump therapy, for colorectal cancer patients whose tumors are inoperable and have spread to the liver. Approved by the Food and Drug Administration, the HAI pump is a palm-sized device implanted below the skin in the abdomen while the patient is under anesthesia. The device continuously administers chemotherapy directly through the hepatic artery, a vessel that provides blood to the liver. HAI therapy is localized and precisely targets tumors, delivering up to 400 times higher drug concentration than standard chemotherapy while limiting side effects elsewhere. Once implanted in the body, the pump is powered by the patient’s body heat, which activates the pump to deliver the medicine.

Toothpaste with ‘artificial enamel’ ingredient is more effective than fluoride. Healthy tooth enamel normally is the hardest substance in the body. Molar incisor hypomineralization, a widespread developmental defect of enamel, affects molars most often, but can also affect incisors. Causes are unclear, although a diet containing lots of acid and sugar aggravates the problem. A study of an “artificial enamel” ingredient in toothpaste has been shown to help build back enamel in teeth, more effectively relieving sensitivity than fluoride while also fighting cavities. According to the study, the ingredient — a synthetic version of the natural mineral hydroxyapatite, which makes up 97% of healthy enamel in teeth — helps restore enamel in teeth affected by hypomineralization. It is also safe if swallowed, making it suitable for children and adults.



Rechargeable deep brain stimulation device minimizes repeat procedures. Physicians at UT Health San Antonio are among the nation’s first to implant a newly approved sensing rechargeable deep brain stimulation device with a 15-year battery life that allows more continual treatment of patients with movement disorders. Deep brain stimulation, known as DBS, is the placement of electrodes in the brain connected to a battery-operated generator in the chest, similar to a cardiac pacemaker. A small impulse of electricity moves from the generator to the electrodes to stimulate a specific area of the brain, relieving some symptoms and side effects for those with Parkinson’s disease, dystonia, epilepsy and essential tremor conditions. The key feature

of the new neurostimulator device is its longevity, a significant improvement over previous non-rechargeable devices that required replacement every three to four years. The extended lifespan translates into the need for fewer battery replacement procedures for patients and less risk of complications in connection with those procedures.

For more stories and in-depth coverage of the life-saving and life-changing research of UT Health San Antonio, visit news.uthscsa.edu.



HEALING HOUNDS

With a wag of their tails, dogs — and other furry creatures — can help humans relieve the anxiety associated with therapy and other medical appointments

BY NORMA RABAGO

On a typical visit to the New Opportunities for Wellness (NOW) behavioral health clinic, you might be greeted in the lobby by the likes of Lady AnnaBella, a Shih Tzu, and her owner, Sandra Olsaver.

The mission of the dozens of teams of volunteers from PAWS (*pets are wonderful support*) for Service and from Therapy Animals of San Antonio that routinely visit the clinic is to help alleviate the anxiety patients may have while waiting for their therapy appointments.

Another benefit of Healing Hounds — the official name of the program — is that the mere presence of these

four-legged ambassadors can create a more productive therapy session by helping patients relax, according to clinic director Megan Fredrick, MA, LPC-S.

The NOW clinic, funded by University Health through the Southwest Texas Regional Advisory Council, is a collaboration with The University of Texas Health Science Center at San Antonio and is open to any adult Bexar County resident in need of behavioral health treatment.

Healing Hounds is the brainchild of Meredith Stensland, PhD, LMSW, a health science center assistant professor of research

HOW HOUNDS HELP

Ample research points to the ways that animals help us, including stress reduction, social support, and even changes in hormones that regulate mood and pain, said Meredith Stensland, PhD, LMSW, a UT Health San Antonio assistant professor of research in the Department of Psychiatry and Behavioral Sciences.

Animal therapy is not a new idea. According to the Alliance for Therapy Dogs, the ancient Greeks used horses to lift the mood of sick patients. In the 1940s, sick and

injured veterans took care of farm animals to ease war-related trauma. Perhaps the first formal use of animals as part of therapy began in the 1960s when Boris Levinson, PhD, a New York City clinical psychologist, discovered that his sessions with children were significantly more productive when his dog, Jingles, was present. With the publication of his book *Pet-Oriented Child Psychotherapy*, Levinson introduced many more practitioners to the concept of the dog as a co-therapist.

in the Department of Psychiatry and Behavioral Sciences. The program is an offshoot of Dialysis Doggos, a research study conducted by Stensland in which dogs were used to encourage dialysis patients to attend grueling appointments and help improve symptoms of pain and depression.

"The study tested the therapeutic value of having therapy dogs visit an outpatient clinic," Stensland said. "I got with Megan and thought, 'Why can't we try and implement it here at our outpatient psychiatry clinic?'"

For Fredrick, incorporating the Healing Hounds program at the NOW clinic just made sense.

"We started during the pandemic in 2020 to get people rapid access to behavioral health care — the care they need, when they need it," said Fredrick. The global pandemic and its resulting isolation amplified the internal struggles and the self-doubt and self-judgment many people were experiencing, she added.

"When it comes to behavioral health, there is a lot of stigma, still," said Stensland. "Having a smiling, friendly presence in the waiting room can make a really big difference."

Cats and bunnies, too

Linda Porter-Wenzlaff, PhD, LPC-S, NCC, MSN, RN, a former health science center faculty member and now a director for Therapy Animals of San Antonio, said their volunteers go wherever invited and visit schools, libraries, hospitals, nursing homes and rehabilitation clinics.

"At a rehab center, a patient can walk a dog on a leash with their owner and the patient may pay more attention to the dog and walk further without a sense of discomfort or pain because the patient is



Therapy Animals of San Antonio volunteer Sandra Olsaver and her Shih Tzu teammate, Lady AnnaBella, happily greet and mingle with NOW clinic patients.

engaging with the dog," said Porter-Wenzlaff.

She's been told by nursing home residents that their only physical contact is for medical purposes such as a blood pressure check or medication administration.

"But when the animal comes in, they hop in the bed with the resident and snuggle," she said. "They tell me, 'It's the only time I have that wonderful positive touch.'"

She said the animal teams are comprised of not only dogs, but also rabbits and cats. Any domestic animal is eligible to participate in the program, and no one breed is more suited as a therapy animal over another. However, every animal and their owner go through a rigorous screening process every two years to ensure ongoing suitability, Porter-Wenzlaff said.

"We made a decision very early we were going to follow national standards and best practices," she said. "It's a matter of safety and ethics for all involved."

Fit for duty

Training animals in obedience is the responsibility of the owner, as is maintaining regular veterinary checks and grooming. When owners believe their animal is ready, they go through the evaluation. Part of that involves testing a dog's basic obedience skills and ability to remain calm while being bumped and having its tail pulled. They likewise are observed while the organization's staff make noise and use equipment typically encountered in the clinic, nursing home or school setting. The relationship between the dog and owner is also evaluated.

"The animal has to look to the owner for direction and support. The owner has to know their animal well enough to anticipate what they need," said Porter-Wenzlaff.

When the dog and owner are certified, they are encouraged to visit facilities near their home.

"It works best if they go with a population they want to be with," Porter-Wenzlaff said. "We have more requests than we can fill, so we have a long list of places and facilities to choose from."

Mood booster

Porter-Wenzlaff's experience as a therapy dog owner is nothing new to the retired nurse. While working as a young nurse in the 1970s with pediatric cancer patients, she noticed the children missed their animals despite visits from their families. Porter-Wenzlaff's solution was to sneak a dog into the hospital.

"I brought the dog up through the back stairway, ran into the patient's room, closed the door and thought I made it," she said. "Within 15 minutes, there were maybe 20 people visiting the dog. I realized how much the animal visit impacted the patient and the physicians, residents and nursing staff."

Later in her nursing career, as a professor at UT Health San Antonio's School of Nursing and as a practicing psychotherapist, Porter-Wenzlaff continued to use animals as a therapy to help patients and to teach students the value of therapy animals.

"When the students of the graduate elective course I taught at the nursing school returned from their required observations, I would tell them, 'Now you see why we do this work.' The impact is more than you would think." 🐾

If you own a registered therapy dog and are interested in making visits to the clinic, call 210-450-7222, or email nowclinic@uthscsa.edu.

UNDER ONE WOOF

The New Opportunities for Wellness (NOW) clinic, the Transitional Care Clinic (TCC) and all child, adolescent and adult psychiatry services of The University of Texas Health Science Center at San Antonio are now co-located at the UT Health San Antonio Behavioral Health and Wellness Center.

"The idea was to have all the services in one place so we can work together as faculty and clinicians so that individuals get the behavioral health needs for them and their family members met all in one place, without fragmentation or big gaps in care," said Megan Fredrick, MA, LPC-S, director of the NOW clinic.

The conditions of adult and adolescent patients using the university's services range from depression to isolation, said Fredrick. Adult stressors may include the economy, family situations, grief and loss, as well as serious mental health conditions. Adolescents face similar stressors with the added burden of fitting into their social groups and the impact of social media or school pressures.

"The pressure of society is harsher on kids than it used to be," noted Fredrick. While in general, psychiatry may have historically experienced longer wait times, the NOW clinic — and the new NOW for Adolescents clinic — will find availability for patients within the week, said Fredrick.

With the additional services in one location, the Healing Hounds program has likewise expanded to include visits to all patients in the center.

Between January 2023 and August 2024, hounds and their handlers completed more than 2,700 visits with patients or their family members.

Roscoe and his owner, SuEarl McReynolds, are among the rotating teams of volunteers at the NOW clinic.





FENDING *off the* SHADOWS

A new cognitive behavioral therapy-based training is helping providers help patients manage their nightmares

BY JESSICA BINKLEY LAIN

For most, having a nightmare is rare. While frightening when they occur, most people are not debilitated by the experience. But for those who suffer from persistent nightmares, the adverse effects can turn their waking lives into a bad dream.

What is a nightmare?

While there is debate in the field of sleep science on exactly how to define it, a nightmare is typically identified as a dream that causes distress to the point of awakening and is remembered by the dreamer, explained Kristi Pruiksma, PhD, associate professor in the Department of Psychiatry and Behavioral Sciences at The University of Texas Health Science Center at San Antonio. Pruiksma is a clinical psychologist and researcher whose work focuses on supporting the dissemination of evidence-based treatments for sleep disorders and post-traumatic stress disorder.

Likewise, there is no definitive explanation for why we dream. One theory is that when we sleep, the emotion and memory centers of the brain are doing a lot of work and processing. At the same time, the part of the brain that organizes information is partially offline and picks up on this activity.

"So, the frontal lobe is half asleep, but still picking up on all this firing and activity, and it needs to process that and make a story out of it," Pruiksma

said. "But with a nightmare, something gets stuck. The brain is trying to process something it doesn't understand, but something's going wrong to the point where it's causing the awakenings."

Bad dreams, bad health

Frequent nightmares not only affect sleep, but also impact a wide range of health outcomes. Patients often experience symptoms such as concentration problems, irritability and chronic pain, as well as depression, anxiety and other mental health issues. For those already dealing with daytime symptoms of PTSD, like flashbacks or intrusive memories, lack of sleep from nightmares makes their symptoms even more difficult to manage.

"Individuals who have frequent nightmares, some have them every night, don't get that chance to escape and rest and restore," Pruiksma said, noting that insomnia goes hand in hand with nightmares, as many patients report resisting sleep due to fear of having a nightmare.

"Some patients engage in avoidance strategies like trying to stay up as late as possible or drinking a lot of water at night so that they have to wake up to use the bathroom instead of being woken up from a nightmare," said Pruiksma. "They might also turn to alcohol or other substances, but all

of these coping efforts just make sleep problems worse in the long run, which may actually increase the chances of having more nightmares.”

Web-based training for providers

Treatment options for nightmares remain an area in need of more research, but patients are often offered a modified version of insomnia treatment focused on therapy methods rather than medications. In clinical practice, cognitive behavioral therapy for nightmares (CBT-N) has



“Through this kind of treatment, patients have more understanding of why they’re having nightmares and feel less alone.”

Kristi Pruiksma, PhD, associate professor, Department of Psychiatry and Behavioral Sciences

proven to be highly effective. However, access to appropriate CBT-N training for behavioral health providers has been limited — until now. Pruiksma, along with a team of collaborators, has created a series of free, CBT-N web-based video training modules that can be widely accessed by providers everywhere. (Visit cbtnightmares.org to register for the training modules.) “Any provider anywhere who has access to the internet can go through these training sessions to

learn how to implement this therapy,” Pruiksma said. The modules are self-paced and interactive, with videos demonstrating what a therapy session might look like. The website also provides resources available to download, including manuals and handouts that offer tips for handling a variety of patients and different presentations of symptoms.

Unique military population

The training module project is affiliated with the STRONG STAR Consortium, which is funded by the U.S. Department of Defense to develop interventions for and treatment of combat-related PTSD and related conditions in active-duty military personnel and recently discharged veterans. STRONG STAR, or the South Texas Research Organizational Network Guiding Studies on Trauma and Resilience, is a national research group led by The University of Texas Health Science Center at San Antonio that brings together the expertise of military, civilian and VA institutions and investigators from across the country.

While Pruiksma’s research has mainly focused on military personnel — a uniquely affected population that experiences higher rates of sleep disorders such as insomnia and nightmares, as well as higher rates of PTSD — the video training is designed to be relevant for a wider audience. It provides recommendations for how to treat people in and out of the military who experience trauma, as well as those with idiopathic nightmares, or nightmares that aren’t related to a stressful event, Pruiksma explained. “Most people have had some degree of trauma at some point in their lives, but this training is really for anybody who is having nightmares, whether trauma-related or not,” she said.

Flipping the script

Cognitive behavioral therapy (CBT) is a type of psychotherapy that helps patients become aware of and change harmful or unwanted thoughts, emotions and behaviors. Considered the gold standard for several mental health issues including depression, anxiety, insomnia and substance use disorder, CBT has also proven to be a highly effective treatment for nightmares. “When CBT is used for the treatment of nightmares, therapists are working with patients to examine and change thoughts about sleep and nightmares, unhelpful daytime

behaviors and sleep habits,” said Pruiksma. CBT methods to treat nightmares involve relaxation training for the patient and exposure to their worst nightmares through writing, describing them in detail. Therapists then guide patients to identify and name the important themes within their nightmare and then write a new script for their nightmare based on that theme, giving them a new story with a different ending. “Patients may have the same nightmare over and over, or nightmares that vary but follow the same theme over and over. It’s like

do see changes in their nightmares and their sleep, Pruiksma said. For some of the best-case scenario patients, they stop having nightmares altogether. Others report experiencing fewer nightmares or a greater ability to go back to sleep and have a regular dream. With improvement to the frequency and severity of their nightmares, patients can get better sleep, leading to improvements in how they feel during the day and reducing symptoms of depression and PTSD. “Through this kind of treatment, patients have more understanding of why they’re having

LEADING THE WAY IN PTSD AND BRAIN INJURY RESEARCH

STRONG STAR, or the South Texas Research Organizational Network Guiding Studies on Trauma and Resilience, brings together the expertise of military, civilian and VA institutions and investigators from across the country. In a recent round of grant awards, the U.S. Department of Defense selected the STRONG STAR Consortium for a total of \$17 million in funding to launch eight new research projects focused on traumatic brain injury and psychological health. “As a group, these new projects will help us better understand and better assess, treat and prevent chronic problems with the two signature wounds of post-9/11 wars — traumatic brain injury and post-traumatic stress disorder — along with a variety of related conditions that stem from them or that contribute to their complexity,” said Alan Peterson, PhD, professor of psychiatry and behavioral sciences at UT Health San Antonio and director of the STRONG STAR Consortium. “Some of these related conditions are suicide risk, sleep disorders and chronic pain, including post-traumatic headache, or chronic headaches that develop from or worsen following a traumatic brain injury,” said Peterson. The new studies will address these problems through a variety of approaches as part of six randomized clinical trials, one treatment development project and one longitudinal follow-up project with previous research participants.

a truck going down a muddy road, and every time it drives on the road, the ruts in it get deeper and deeper,” Pruiksma explained. “The idea is that we’re starting to create a new path for the mind to drive on. They don’t necessarily go on to dream the new dream, but something happens to the nightmare. The brain doesn’t go down that track anymore, or if it does, it’s not as severe.” Most patients who undergo this intervention

nightmares and feel less alone,” Pruiksma said. “They feel like they have more control over their lives in some way, which is an important outcome — to have the tools that can empower them to take control of their health.”

The COMMUNITY as the CLASSROOM

School of Public Health leaders identify seven unique attributes of the new Master of Public Health degree program

COMPILED BY ORITH FARAGO AND KARLA HIGNITE



This fall, several dozen students became part of history as the inaugural cohort of the university's new Master of Public Health in Public Health Practice and Administration program, the first degree offering of The University of Texas School of Public Health San Antonio. But what will these students learn as they usher in an era of immersive research and learning, exploring effective public health solutions in partnership with local populations? Academic leaders share how this program is essential and unique for South Texas.

COMMUNITY-LED

I refer to this sixth school of our university as "The People's School" because people are at the center of everything that we will do. Our mission is community-driven. We think of our school as something integrated into the community from conception. That means we see an accountability of the school to the community, and we treat the community as equals in what we're doing. We use words like co-contribution, co-learning and co-ownership to indicate the community is the classroom.

Within our tripartite mission of education, research and service, we see ourselves as a catalyst and facilitator that brings community stakeholders together and synergizes that effort to result in changing the health of the community as a whole.

One of our missions — education — is itself a primary social determinant of health overall because education gives you economic opportunities. We are building a curriculum that is flexible so that we can accommodate the work schedules of our students while also providing a pathway where they can receive applied practical experiences working with local organizations. These experiences are critical, as these organizations might serve as their future employers.



What is public health? Public health is about partnering with the wide fabric of community stakeholders on leveraging assets and addressing concerns that determine the well-being of all individuals. Our missions of research and service revolve around working with community partners to identify and fine-tune the solutions that already exist for achieving success. This means working with The University of Texas at San Antonio, the Metropolitan Health District, Bexar County's Preventative Health and Environmental Services Department and with a range of faith-based and non-governmental organizations and non-health care-related services like transportation, housing, utilities and law enforcement.

Vasan S. Ramachandran, MD, FAHA
Dean, UT School of Public Health San Antonio
Frank Harrison, MD, PhD, Distinguished Chair in Public Health
Professor, Department of Quantitative and Qualitative Health Sciences

SERVICE-FOCUSED

Our strategic vision for this program and for our school emphasizes the importance of service that meaningfully impacts the community we are serving.

To that purpose, our curriculum engages students in coursework related to public health practice and administration that adheres to the guidelines and criteria set by the Council on Education for Public Health.

We are excited about our multidisciplinary faculty and advisers who will assist students and mentor them through the process not only of what they learn in the classroom, but also as they translate this knowledge into practical terms when they engage in their applied practice experience working with community organizations.

Among the council's guidelines we're following is to require each student to complete a capstone learning experience or discovery-based paper. This takes place in the student's final year after being exposed to various knowledge bases in the classroom and completion of their internship. This integrative learning experience equips students to synthesize their didactic

classroom learning and experiential learning within the community to prepare them for their future work as public health practitioners.



What is public health? We know that where you live, your income, your education and your access to health care play a big role in your health outcomes. In fact, the American Public Health Association has identified that your ZIP code could influence your lifespan by as much as 15 years. The science is clear that poverty and poor health often go hand in hand, and to advance our nation's health, growing income inequality also must be addressed. So, we must shift the main focus of our health system from one that focuses on treating illnesses to one that focuses strongly on prevention. That is what public health is about.

Emmanuel A. Iyegbuniwe, PhD, MBA
*Founding director, Master of Public Health program
Associate professor, Department of
Environmental and Occupational Health*

STORY-DRIVEN

All students will have foundational competencies in all areas of public health and will pick an area in which they want to specialize. Within that context, we are the department that will help students accomplish their work by incorporating methods, statistics and epidemiology.

There can be a tendency to lean very heavily toward the numbers, the quantitative. But the qualitative piece really gives a story to those numbers. Most people tend to gravitate toward one or the other. Instead of picking their favorite tool, I want students to learn to pick the right tool or the right combination that addresses the problem with which they are dealing.

One way to approach a new problem is to start with qualitative methods, such as having focus groups and doing interviews where students go to the community and learn the community's language and how they're talking about a problem. Doing qualitative research with smaller numbers of people can inform how we can then conduct a survey to capture larger populations in a meaningful way because we've learned the right ways to measure things. This collection of qualitative and quantitative information can inform

interventions, which can then inform policy.

One example of how we've managed to move qualitative and quantitative information to policy is with policies for legal-age requirements for the purchase of alcohol. In the 1980s, to address the problem of how much alcohol was in high schools, we moved the legal age to buy alcohol to 21. The result was a significant reduction in adolescent drinking and drunk driving accidents. More recently, we've started to do this with tobacco. Just a few years ago, Texas passed a law that you need to be 21 to buy tobacco. Yes, those under 21 still get access to these things, but at much lower rates.



What is public health? Public health is not about scaling up an individual medical intervention or treatment. This is much more about structural change. It's about prevention and intervention — intervening further upstream so that we are focused not on treating a chronic illness, but on preventing it from happening.

Tracey E. Barnett, PhD
*Chair and associate professor, Department of
Quantitative and Qualitative Health Sciences*

EVIDENCE-BASED

The two broad areas of interest for this department are environmental health, with a focus on developing preventive strategies to improve the quality of our environment and mitigate the health effects of pollution and contaminants on communities, and occupational health, with a focus on developing strategies to promote a safe and healthy work environment. Our department is also interested in policy and advocacy, studying how environmental and occupational health policies contribute to developing regulations and advocating for policies that promote health and well-being.

For example, if you think about heat waves, those affect communities and certainly affect workers, including agricultural workers and

construction workers. We need to protect these workers and their communities, and there are a lot of things that we can do, like having shade for breaks. We need to focus on the things a community can do something about.

Within that context, our school will assist in the transformation of South Texas through several strategies:

- Engaging with local communities to understand their unique health needs and challenges and how to tailor interventions and strategies to the specific context of South Texas.
- Conducting research on the health issues prevalent in the region, monitoring trends and identifying emerging health threats so the appropriate evidence-based interventions can be developed.

- Promoting and delivering education and training to the current and future workforce of public health professionals.
- Addressing the health disparities present in the region to ensure equitable health outcomes for all.
- Strengthening the region's capacity to respond to crises, be they natural disasters or public health emergencies, and ensuring the safety and well-being of communities in the region.



What is public health? On a broad level, public health aims to address the upstream causes, the so-called social determinants of health, or "the causes of the causes." In that effort, public health professionals work across disciplines, sectors, domains and communities, teaching and applying environmental and occupational health, epidemiology, biostatistics, health policy and management, social and behavioral sciences and more to create conditions that support health and well-being on a large scale.

David Gimeno Ruiz de Porras, LPsy, MSc, PhD
*Chair and professor, Department of Environmental
and Occupational Health Sciences*



PARTNERSHIP-ALIGNED

This department is at the intersection of public health and health care. While not everyone knows what public health is, almost everyone understands what medical care or health care encompasses. Our mission is to advance public health through improved access to care, enhanced delivery of health care services and better population health outcomes overall and specifically for people in South Texas.

We focus on three main areas:

- Provision of health care services, including programs to evaluate and enhance availability of needed care, quality of care, health outcomes, health care costs and the health care workforce.
- Administration of organizations and systems that deliver health care services or support individuals and their families in receiving needed health care.
- Policies to advance population health at local, regional, national and international levels.

This includes working to understand and address issues including health disparities, insurance, health care financing, experience of care, social determinants of health, health care leadership and medical technology assessment.

To address these goals, we’re committed to partnering with community-based organizations, government agencies, military services, academic institutions, health care organizations, insurers, private companies and other groups involved in health care.



What is public health? Public health is a process where members of the community and organizations supporting health and health care work together to improve population health outcomes. Because so many factors can influence the health of populations, and different factors are important for improving the health of different population groups, no one entity can do this alone. By working with partners, we can improve population health and enhance the value of health services, programs and policies.

Michael T. Halpern, PhD, MD, MPH
Chair and professor, Department of Health Policy and Health Services Administration



MORE PROGRAMMING TO COME

In addition to the inaugural Master of Public Health program launching this fall, a second dual degree program is scheduled to begin in summer 2025. The program will offer a joint Doctor of Medicine from the Joe. R. and Teresa Lozano Long School of Medicine and a Master of Public Health in Health Systems from the UT School of Public Health San Antonio. A doctoral program will follow within several years.



SOCIETY-CENTRIC

I describe the focus of this department as covering everything from womb to tomb. We want to help people have healthier lives where they work, play, learn, pray and age. We consider every aspect of society in public health and the influences that impact how people behave, how policies are instituted and how communities and organizations are developed and evolve to help people pursue what’s best for them.

By working collaboratively with and learning from the community, we can better understand different factors that influence what’s happening within a community or population.

How our communities are organized influences how we live and what we can do. In theory, policies are based on what people want and desire. Public health, in part, helps bring awareness so people can voice their concerns and say what they want to see in the policies put in place by our policymakers.

Public health advocacy is important to

help ensure those policies prioritize a healthy default for everyone so that workers aren’t spending 10 hours sitting or standing, and that neighborhoods have access to nutritious food.



What is public health? Public health is difficult for many to understand because it can be hard to measure. How do you measure something that’s not happening? Because if we are successful, there won’t be high rates of diabetes or kids smoking cigarettes. The importance of public health is helping people better understand that what happens to you impacts your neighbor. We don’t live in a vacuum. We live with each other, and how we live influences everyone else.

Cristina S. Barroso, DrPH, MPH
Chair and associate professor, Department of Health, Behavior and Society

POLICY-ORIENTED

Policy development is one of the core functions of public health, which includes assessment and assurance. When most people think about policy development, they think of politicians. They may not think about zoning, where liquor stores are located or who gets a tobacco license. They may not think about the occupational health space such as who must wear protective equipment, why they must wear it or how long it must be worn. Public policy applies to everything from zoning to ordinances around trash collection.

During the COVID-19 pandemic, when hospitals were at and beyond capacity, we all came to understand the need to prioritize public health. What we quickly learned was that in a situation where the majority of a population is at risk of illness or exposure to illness, it can

cripple a health services system if that system wasn’t made to deal with that level of burden.

What ultimately worked was adopting public health measures, like wearing masks, quarantining and all the other preventative things that help to ease the burden on the system. Those were policy decisions, and coming to those kinds of decisions usually requires dealing with various stakeholders and understanding the risk associated with action or inaction.

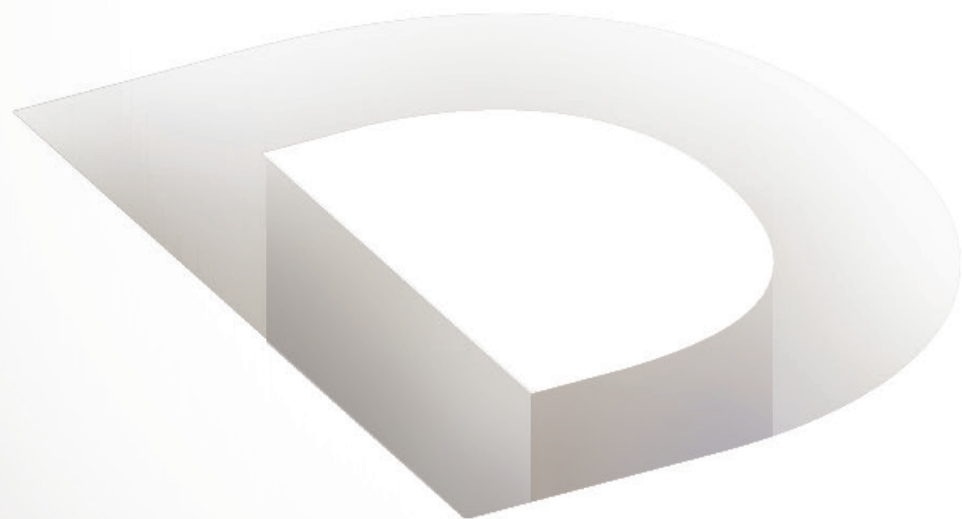
The curriculum we’ve designed at the UT School of Public Health San Antonio is purposed around training students to understand their role as conveners of conversations around issues that impact health. It’s been refined over time to focus on ensuring that students who will graduate from our program are equipped with the tools they’ll need to ask really smart questions to help solve problems and help people reach healthy outcomes.



What is public health? Public health is about creating conditions where everyone can be healthy. No one can change something alone, but together we can do a whole lot. And that is the point of public health. It is galvanizing people to engage in conversations that lead to solutions that impact our health and the health of the world around us.

William Garner, DrPH, MPH, FACHE
Associate dean, Academic, Student and Faculty Affairs
Associate professor, Department of Health Policy and Health Services Administration

DISCUSSING DEATH



Integrating palliative care competency into nursing curricula prepares students for the complexities of end-of-life care

BY KRISTEN ZAPATA

Few words hold as much weight as the ringing echo of “death” uttered in a room. Despite the discomfort that can accompany discussions about death and dying, this largely taboo topic lies at the heart of every serious injury, illness and end-of-life journey. Yet imagine a patient’s expectation when facing their most vulnerable moment. They rely on their health care providers to navigate this delicate conversation with grace and expertise.

Enter Megan Lippe, PhD, MSN, RN, ANEF, FPCN, FAAN, a palliative care educator who confronts the silence surrounding mortality head-on. As an associate professor at The University of Texas Health Science Center at San Antonio’s School of Nursing, Lippe champions a bold teaching strategy: Learn to embrace the “D” word.

“How can someone talk to their patient about death if they aren’t even comfortable saying the word?” asked Lippe. “The principles of communication are important for this process. We have to balance the need to prepare patients and their families for the possibilities ahead while also understanding the power of silence and giving them space when they are facing these difficult situations.”

Lippe’s job — and her passion — is to ensure each new graduate leaves their program as a competent member of the health care team. That means they enter professional practice well-versed in addressing not only the physical symptoms of someone enduring a serious illness or injury, but also the psychosocial, emotional and spiritual needs of the patient and their family.

Need to know

In 2021, the American Association of Colleges of Nursing (AACN), an organization that establishes quality standards for nursing education, deemed palliative care an essential competency.

“The association updated their curricular guidelines, and as part of that, hospice, palliative and supportive care was named as one of four critical spheres of undergraduate and graduate nursing education,” Lippe said. “It went from nice to know to need to know.”

The Essentials: Core Competencies for Professional Nursing Education, AACN’s educational framework for baccalaureate and graduate nursing programs, provides specific guidance for the development or revision of a curriculum for each degreed program, including core competencies each new graduate must exhibit.

While AACN deemed palliative care a basic human right and beneficial at any stage of a serious condition, Lippe said “nurses cannot practice what they do not know.” The End-of-Life Nursing Education Consortium, in partnership with AACN, updated its document of palliative care competency statements for undergraduate and graduate students. These statements are known by nurse educators and students as *Competencies And Recommendations for Educating Nursing Students*, or CARES and G-CARES (for graduate education), respectively, and are guidelines essential for enhancing care quality, supporting nurses’ professional growth and ensuring culturally competent care.

“Palliative care did not change with these

SHAPING THE FUTURE OF PALLIATIVE CARE



Because of her multifaceted expertise and dedication to advancing nursing education and palliative care, **Megan Lippe, PhD, MSN, RN, ANEF, FPCN, FAAN**, has been awarded fellowship into three esteemed organizations: the American Academy of Nursing,

National League for Nursing's Academy of Nursing Education and Palliative Care Nursing.

"Dr. Lippe is an exceptional leader, and she is contributing much to the advancement of care for the seriously ill by preparing our nurses," said Betty Ferrell, PhD, FAAN, FPCN, CHPN, the principal investigator of the End-of-Life Nursing Education Consortium. "Her years of work in creating curricula, innovative teaching strategies and evaluation methods has reached over 1,100 undergraduate and 375 graduate programs."

ELNEC is a national program dedicated to improving palliative care by equipping nurses with training in skills such as pain management and communication.

As a member and regional chair of the consortium, Lippe is working with other nursing faculty to shape the future of palliative care education. She is the lead author of the End-of-Life Nursing Education Consortium curricula, as well as the American Association of Colleges of Nursing-endorsed national palliative care competence statement revisions for both undergraduate and graduate education.

Lippe's collaborative research efforts have likewise produced new quantitative measures to assess primary palliative care curricula and competence for advance practice and entry-to-practice nurses.

updates," noted Lippe. Rather, the language around competency was updated to better align with the new curricular standards to make them more meaningful for schools of nursing.

"We are now really speaking to the role of the nurse when patients are seriously ill or actively dying."

One such statement now reads: "Provide culturally sensitive care that is responsive to rapidly changing physical, psychological, social and spiritual needs during the dying process and after death." Students can now be assessed based on how well they adjust to changing needs during the imminent death period.

As one real-world example, Lippe recounts a story she often shares with students about taking care of a patient from Mexico.

"The chart documented his religion as Catholic, but [he was] Jewish. Someone made an assumption instead of asking about his spiritual or religious beliefs," said Lippe. "These details inform how we care and interact with our patients and their families. We can unintentionally do harm by making assumptions. Every person is unique, and we must be proactive in respecting each of their values, beliefs and preferences."

Simulating reality

Adding to her belief that nurses cannot practice what they do not know, Lippe said nurses cannot know unless they practice, and that they should practice in a safe and controlled environment.

Simulated experiences are a valuable component of nursing education, and Lippe has created several simulations inspired by real-life scenarios she experienced. One simulation walks students through several interactions with a family of a seriously ill patient that leads to the withdrawal of life-sustaining measures.

"I designed the first part to begin with the family not fully understanding what's going on with their family member," Lippe said.

"How long will he need the tracheostomy? We are going to Paris in one month. Will it be out by then?" asks an actor portraying the patient's wife during the simulation. The students are tasked to interact with the family, providing information and comfort while their instructor observes.

The exercise then requires students to assess the patient and communicate with the physician.

Students might use the popular SBAR (situation-background-assessment-recommendation) communication framework to identify the problem and, based on pertinent information about the patient and the patient's condition, consider options and recommend actions.

The final phase of the simulation is Lippe's favorite.

"After the family meets with the physician, the students further explore treatment options with them. The wife of the patient decides to withdraw life-sustaining measures, specifically the ventilator and medications to sustain blood pressure," Lippe said.

"I love that part, to see how their jaws drop because they expect the wife to be in denial or fight for her husband's life, so they're like, 'Huh?' This situation teaches them to be prepared for families to surprise them and to quickly adapt to support their decisions, wherever the patient and family are in their journey with a serious illness," said Lippe.

A debriefing session follows each part of a simulation to discuss the communication, care and strategies used, as well as how students felt about the experience.

"I like the idea of putting students in a simulation scenario first. It's a safe space for them to practice and develop their care and communication strategies and receive feedback," Lippe said.

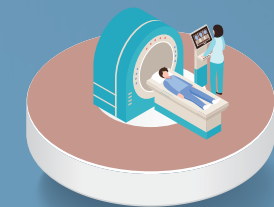
"When we think about patients who are actively dying, it is a sacred space. We want students to be as prepared as possible to provide holistic, quality care to patients and families when they enter these sacred spaces."

CARES competency

Achieving competency is at the heart of the knowing and practicing cycles. Nursing educators across the nation are working to enhance their curricula to teach palliative care content and assess competency, said Lippe. To support them in this endeavor, Lippe leads a national team of nursing faculty and palliative care nursing experts who are developing helpful resources through the End-of-Life Nursing Education Consortium.

"CARES and G-CARES are very broad but intended to be really helpful for curricular guidance," Lippe said. "We also needed

FOUR SPHERES OF CARE



Wellness, Disease Prevention

Promotes health and prevents illness through education, lifestyle modification and early-detection strategies



Chronic Disease Management

Manages long-term conditions to optimize quality of life and minimize disease progression through ongoing care and support



Regenerative/ Restorative Care


Restores patient health and functional abilities following acute illness or injury through rehabilitation and recovery-focused interventions



Hospice/Palliative Care

Provides compassionate care to relieve symptoms and improve the quality of life for patients with serious, life-limiting illnesses, including end-of-life care

Source: *The Essentials: Core Competencies for Professional Nursing Education*, American Association of Colleges of Nursing, 2021 (fig. 2, pg. 19).



“How can someone talk to their patient about death if they aren’t even comfortable saying the word?”

Megan Lippe, PhD, MSN, RN, ANEF, FPCN, FAAN, associate professor, School of Nursing

a competence assessment regarding specific observable behaviors of students — some way to verify that students can actually do those behaviors by graduation and demonstrate an ability to provide palliative care.”

Putting their collective experiences together, the team produced a primary palliative care nurse competence model and assessment tool, a student assessment tool that connects clinical behaviors to the CARES competency statements. It also works in conjunction with other supporting documents the team created to map each CARES statement to curricular guidelines in AACN’s *Essentials* framework.

“To go back to our [simulation] example, the role of a nurse is to adjust care to a patient’s rapidly changing needs physically, psychologically, socially and spiritually when a patient is dying,” Lippe said. “Is a student able to adjust through the care process based on a patient’s condition or not? If a student is in a simulation or at the bedside, I can actually watch them do this and evaluate it.”

Rethinking palliative care

For Andrya R. Rivera-Burciaga, DNP, APRN, FNP-BC, ACHPN, a student in the School of Nursing’s PhD in

Nursing Science program, having a faculty member on staff who is an expert in this area and who is creating tools on behalf of the profession is beneficial.

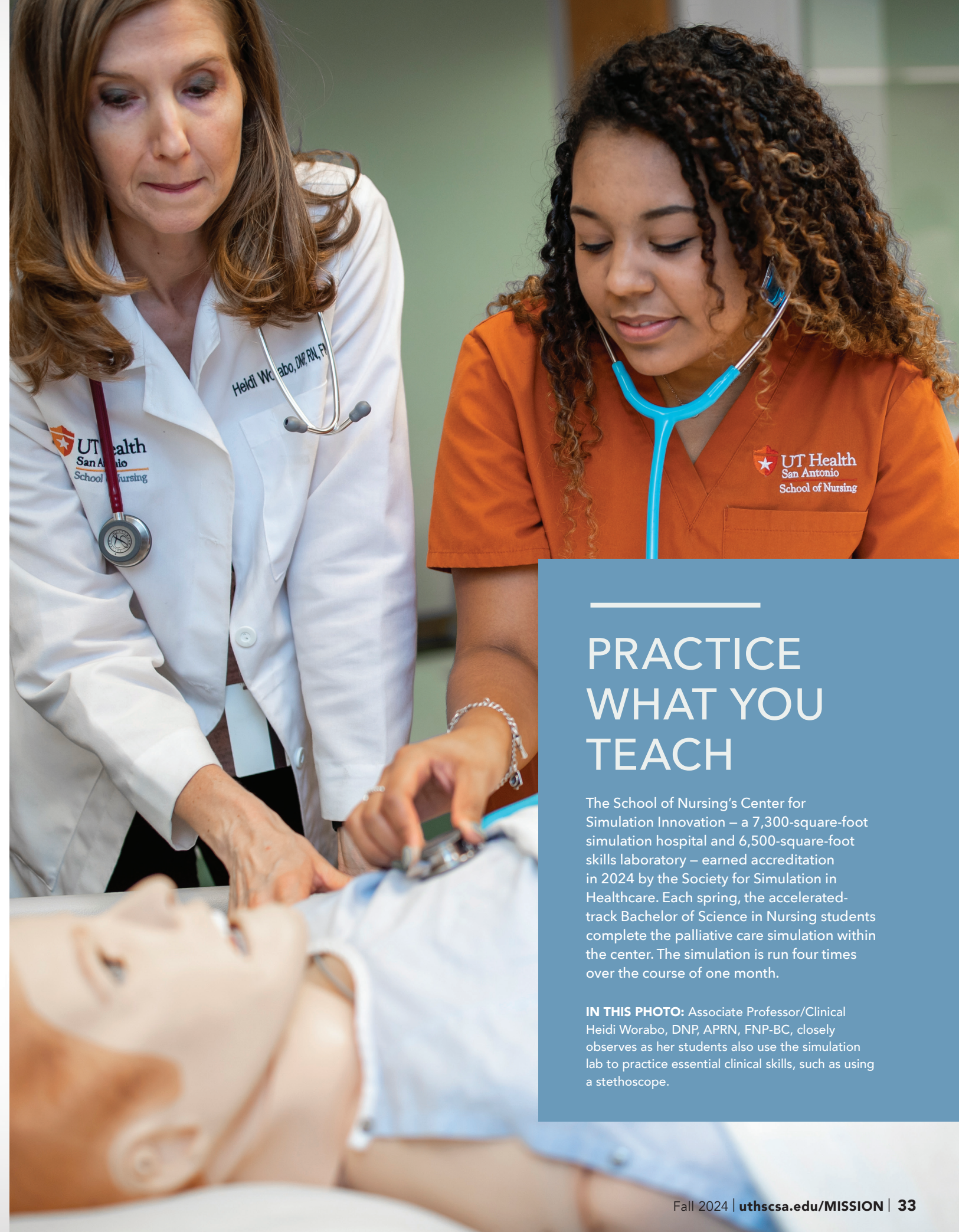
“As an advanced practice nurse, I feel there is still a perception in the profession that palliative care isn’t as important as other spheres of care, but the updates to nursing education and tools such as these will bring an awareness that palliative care is valuable,” she said.

Lippe believes it is important for educators to see that their students are already at the bedside of so many patients who would benefit from palliative care.

“As educators, we need to re-envision and expand the who, what, where, when, why and how of palliative care education to ensure we prepare future nurses and health care professionals who will care for these patients and their families,” Lippe said.

“In taking a step back to realize where nurses are taking care of patients with serious illnesses, we find it is everywhere. Palliative care is needed throughout our community because that’s where our patients who have a serious illness live,” said Lippe.

“Our goal is to empower the workforce to improve the quality of life of patients and families living with serious illness across the disease trajectory and at the end of life.” ★



PRACTICE WHAT YOU TEACH

The School of Nursing’s Center for Simulation Innovation – a 7,300-square-foot simulation hospital and 6,500-square-foot skills laboratory – earned accreditation in 2024 by the Society for Simulation in Healthcare. Each spring, the accelerated-track Bachelor of Science in Nursing students complete the palliative care simulation within the center. The simulation is run four times over the course of one month.

IN THIS PHOTO: Associate Professor/Clinical Heidi Worabo, DNP, APRN, FNP-BC, closely observes as her students also use the simulation lab to practice essential clinical skills, such as using a stethoscope.

One researcher's mission to restore hope to Parkinson's patients and others with swallowing disorders includes teaching them exercises to build strength and function

BY KATE HUNGER

HARD TO SWALLOW

The act of swallowing is deceptively complex, a symphony of physiology that relies on the split-second, seamless coordination of 26 muscles and nine cranial nerves. The ability to swallow is essential for eating and drinking, and yet about 20 million adults in the U.S. experience a condition called dysphagia — literally, difficulty swallowing.

Some people's symptoms are so severe, they are unable to swallow food or even their own saliva.

"Swallowing is probably one of the most complex neuromotor behaviors a human being can do," said Giselle Carnaby, PhD, MPH, CCC-SLP, a professor in the Department of Health Sciences in the School of Health Professions at The University of Texas Health Science Center at San Antonio.

"It is connected to one of the cardinal, or most important, things that humans like to do, that gives them comfort, gives them self-identity, gives them reward and socialization — which is eating. Imagine if you couldn't eat at all or drink anything, and you had to sit and watch everybody else," said Carnaby. "On the tree of important things that humans do, it's second to breathing."

A speech pathologist and public health scientist, Carnaby has spent more than three decades in clinical practice actively researching swallowing and swallowing-related disorders and developing therapies to treat the most severe cases. She joined the faculty of the School of Health Professions in 2021 and directs the PhD in Health Sciences program, a collaboration with the university's Graduate School of Biomedical Sciences.

Carnaby also founded the Swallowing and Upper Aerodigestive Research Laboratory, where she is conducting a study to determine whether an exercise-based dysphagia intervention — the McNeill Dysphagia Therapy Program that was originally developed to help people recovering from stroke — can be used as a preventative intervention for people with early Parkinson's disease.

This is not to cure Parkinson's. It is secondary prevention, said Carnaby.

"If we can show a difference in pre- and post-intervention in early Parkinson's patients who do not have obvious difficulties with swallowing, then the conceptual background is that it should be more

beneficial in patients with more significant issues," she said.

As Carnaby explains, dysphagia in people with Parkinson's disease increases morbidity and mortality and decreases quality of life; the progressive neuromuscular disorder causes swallowing disorders in about 80% of patients at some period over the disease.

'We can remediate this'

Carnaby decided to pursue a career in research because she grew frustrated by unanswered questions early in her career in her home country of Australia.

"After working for a number of years in an acute care hospital, I realized that I didn't have any answers to any of the questions I wanted to ask, and I couldn't find answers anywhere," she said.

So, she chose to focus on swallowing while earning a Master of Public Health degree and then a PhD in public health. Her passion stems from witnessing the strain, serious illness and even death that dysphagia can cause and knowing that something can be done for it.

"Food nourishes the brain," Carnaby said. Not being able to access that nutrition simply because you can't eat opens you up to all sorts of health problems, she added.

"And it's so, so preventable. We can remediate this. We can fix it. We can change it. There are very few cases I have run across in my history that I can't help in some way," Carnaby said. "I can't think of anything more socially isolating than not being able to eat or drink anything."

Empowering patients to rehabilitate

Carnaby is collaborating with a multidisciplinary team of researchers from the university, including Assistant Professor Megan Carreon, MA, RRT, in the Department of Respiratory Care; and Associate Professor Okeanis Vaou, MD, FAAN, in the Department of Neurology.

"What's different here is the level of expertise and the access to the high-end study equipment we

have here,” Carnaby said of the specialized imaging, swallow and lingual strength measurement and respiratory equipment that enables researchers to see, hear and measure what is happening during the study participants’ swallowing in therapy.

The program the team is researching forces the participants’ muscles to work fast and hard while progressing through a hierarchy of increasingly hard-to-swallow foods, said Carnaby, who said the process is similar to developing a workout routine.

“The best way to describe it is you go to the gym and start with a simple exercise like walking on the treadmill. Then you introduce weights, and then you are dancing and lifting your legs higher,” she said. “Every next activity is harder and more challenging and pushes your system, so you are not just growing in strength, you are growing in range and coordination and complexity of movement pattern. It layers on.”

It is the same with swallowing.

“It is developmental over a period of time, forcing the mechanism to work in ways it is not normally being used,” she said.

The therapy program combines motor control

elements so that motor function is changed as patients build strength. Patients practice at home. They and their families are trained on the intensive therapy so that they can return to the methods as needed after leaving the therapy setting.

“The patient takes it home with them, and it lives with them, and it changes their behavior from the ground up,” Carnaby said.

Changing minds

The conventional thinking in health care regarding swallowing disorders holds that swallowing is a reflex that will return, and that until then, the priority should be keeping patients safe, Carnaby said. The typical treatment for swallowing disorders often is one of managing the swallowing disorder rather than actively seeking to rehabilitate it.

“Years ago, we used to modify diets and keep patients on easy-to-eat, mushy foods,” she said. “This is the reverse of that.”

The exercise-based approach used in the Parkinson’s study is customized to each patient. The decision to work with people with Parkinson’s disease was an intentional choice to flip the original timing of the therapy on its head.

“What we are doing with the Parkinson’s patients is saying, ‘Let’s take this idea of rehabilitation and this intensive rehabilitation program that we know works, and let’s provide it as a preventative,’” she said. “Teach it up front and then maybe we will extend the period of time where their swallowing is normal and easy for them.

“If we can make them safer and more effective functional feeders for longer, we save costs, save hospitalizations, save stress, save morbidity. There are lots of benefits.”

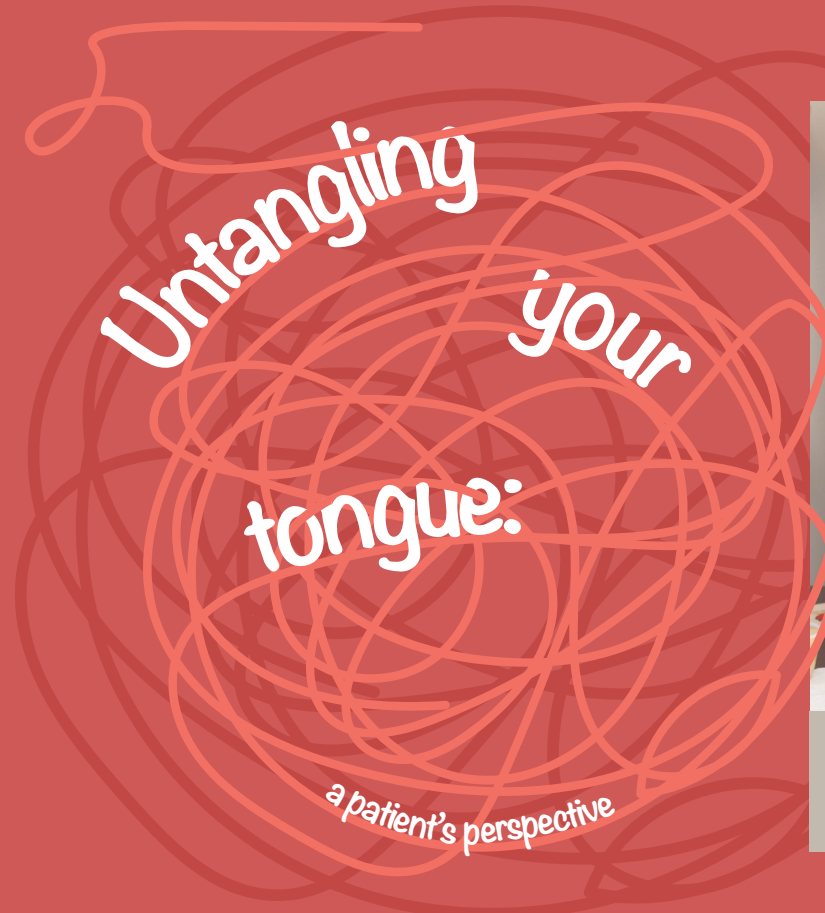
Carnaby is treating patients under research protocol, and she continues to hear from people around the world who are seeking help for severe dysphagia that has not been treated successfully. Although stroke, head and neck cancer and Parkinson’s disease are some common conditions that increase the risk of swallowing disorders, age is another risk factor, as are a range of other conditions for which Carnaby sees potential for helping people maintain or regain their swallowing fitness.

“We’re slowly changing people’s minds about how you do this sort of intervention and with different populations,” she said. 🌟



“I can’t think of anything more socially isolating than not being able to eat or drink anything.”

Giselle Carnaby, PhD, MPH, CCC-SLP, is cross-appointed in the Department of Communication Sciences and Disorders in the School of Health Professions and in the Department of Otolaryngology in the university’s Joe R. and Teresa Lozano Long School of Medicine



Carlos González consuming a meal of his choice in 30 minutes as part of his treatment. González joined the study in 2024.

Although it has been 18 years since Carlos González was diagnosed with Parkinson’s disease, he only began to experience problems with swallowing about two years ago.

González and his wife, AnnaMaria Ornelas, are always seeking to learn more about treatment options for Parkinson’s. When they learned that Professor Giselle Carnaby, PhD, MPH, CCC-SLP, was giving a presentation on a swallowing intervention for people with Parkinson’s, they hurried home — from their boxing group for people with Parkinson’s — to freshen up and attend.

After hearing Carnaby speak, they were on board.

“We didn’t even think twice,” Ornelas said. “We said, ‘This is what we need to do.’”

“I’m always willing to try something new and different,” González said. “It made a lot of sense to me.”

Carnaby is researching the effectiveness of an exercise-based dysphagia intervention for people with Parkinson’s disease who are experiencing the swallowing disorder called dysphagia. She believes the approach may help prolong their swallowing proficiency before it becomes significantly affected by the progression of their disease.

When González joined the study in 2024, he underwent imaging and other assessments, including the measurement of his swallowing frequency. Over

the course of 12 sessions, he learned a specific method for eating that includes paying attention to his breathing and swallowing and employing strategies for clearing food from his throat. He built up his strength and technique by working through a hierarchy of foods that are increasingly difficult to eat, with one of the hardest being a Cobb salad.

“I think my tongue began to untangle itself,” he said of the changes he noticed. He compared the intervention to a workout, but one that is calibrated depending on the food being eaten.

“What Dr. Carnaby is doing is a whole new technique,” he said. “She describes it as doing a pushup.”

Before beginning the program, González carried a folded napkin to wipe his mouth because his slower rate of swallowing caused him to drool. He also would cough frequently to clear food lodged in his throat. Both issues subsided with treatment, he said.

At the end of the program, González took a test of sorts: He had to consume 400 calories of a meal of his choice in 30 minutes. As he worked his way through a pile of breaded chicken strips and fries, Carnaby monitored his progress and offered encouraging reminders.

“Swallow hard and fast,” she said. “Less is more with this kind of stuff. Keep it as simple as possible.”

READY TO RESPOND

Practicing emergency medicine far from the emergency room is how some medical students test their first-responder skills

BY STEVEN LEE

There's never a good place to have a heart attack, but some places are worse than others.

Clutching my chest and sprawled on the Ernst Ridge Trail in Big Bend National Park, high up in a corner of this most vast and remote of Texas parks, I was at least 30 minutes from an ambulance, plus the time to get to a pickup location. Once there, I was still about two hours from the nearest emergency room, and five hours from the closest trauma center. Helicopter? Maybe four hours, if it had a place to land.

Luckily, I was hiking with a group of fourth-year students and faculty from the Joe R. and Teresa Lozano Long School of Medicine at The University of Texas Health Science Center at San Antonio. Even luckier, I was acting — playing a heart attack victim in one of seven wilderness emergency scenarios staged by students and faculty of what is possibly the most in-demand elective course at the medical school, judging by how immediately it fills up and the waiting list.

The four-week class goes by EMED 4007, Wilderness and Survival Medicine, and includes a four-day trip to Big Bend, where students practice their emergency medicine skills in an austere environment.

Or “like ER without the resources,” said Bill Jones, MD, clinical assistant professor of emergency medicine, director of the school's Wilderness and Survival Medicine Fellowship and a former fellow himself. Jones was one of 15 faculty and other physicians who joined a total of 44 students rotating in three groups throughout 10 days in

February 2024. They all met at a group campsite at Rio Grande Village in the southeast corner of the park, about 50 yards from the Rio Grande.

A practical course

The course dates to 2020 when its director, Steven Moore, MD, clinical associate professor of emergency medicine, started off wanting 20 students, but took 26. Next time, he capped it at 35. This year, 63 students signed up the moment registration opened, and Moore eventually settled on 44 students.

“The feedback we get every year is ‘It’s the best course I’ve ever taken.’ A lot of them call it ‘The most useful course I’ve taken,’” said Moore.

Emergency medicine is a required clerkship for a third-year medical student at the school, so students need to complete that before taking this course. While many of the students who participate will specialize in emergency medicine, a growing number are pursuing other specialties — from internal and family medicine to surgery, anesthesiology, ophthalmology and radiation oncology. They see the merit in applying what they’ve learned the past four years of medical school in this most basic, sparse environment.

Learning to group problem-solve

For the scenarios, Moore had this bit of instruction to the group: “Just immerse yourself in the scenario and let your common-sense brain kind of kick in,” he said. “Think about the weather, think about

what's comfortable for you, think about how you would be if you were this patient. Don't worry so much about getting the right answer. Just think about the problem and work through it."

The first scenario simulated patients with fairly routine abdominal pain, with one needing to be picked up and carried. The next scenario, though, jolted the students soon enough: a catastrophic boat accident on the river with mass casualties.

The depicted casualties included a drowning cardiac arrest, a pediatric hypothermia/respiratory arrest, an open/compound femur fracture with femoral artery laceration, an unconscious head injury, a shoulder dislocation and a missing uninjured infant requiring a hasty search — plus a hysterical parent distracting the medical providers.

"Where's my baby? Where's my baby?" Jones, as the hysterical parent, shrieked. Austin Gay, MD, a third-year resident helping on the trip, simulated the fracture and laceration victim as students carefully applied tourniquets. Jacob Feldman, MD, clinical assistant professor of emergency medicine, playing the unconscious head injury patient, lay motionless on the bank. Other actors portrayed less serious injuries. Dummies were used for the baby and for the lone fatality.

Moore and Ryan Bierle, DMSc, PA, clinical assistant professor of both emergency and internal medicine, prompted the students as needed, trying not to direct and instead pushing them to determine treatment, commit to it and go.

The students scrambled from patient to patient, asking questions, doing assessments. When one student suggested a patient needed neurosurgery, Moore reminded, "Right. Which is where? Five hours away. So, we need to be calling."

A satellite phone appeared, and a call was role-played as part of the scenario. The students then pivoted to an evacuation plan. They set to work building a rope litter — essentially a stretcher — carefully placing Feldman on a tarp, tying it over with ropes and large carabiners and then lifting and carrying him up the boat ramp to the parking lot.

Afterward, everyone gathered in a circle to discuss what went right and what went wrong. Should they have initially triaged Feldman as a category red, indicating severe distress, instead of a less-serious yellow? Should they have applied only one tourniquet first, and waited to apply the second as needed? Should they have moved faster, with water rising from the river?

Feldman, for his part, was complimentary.

"I thought the communication was really good. You communicated very clearly," he said, adding, "And not dropping me — I really appreciated that."

Life and death along the trail

It was getting closer to my cameo. Heading up the Ernst Ridge Trail, we separated into two groups of students and faculty. Moore had asked me to go with the first group, but to intentionally fall behind and

BELOW: Steven Lee (center) is tended to by medical students, clockwise from left, Ethan Deschner, Kyle Zatyko, Alex Henze and Mahnoor Liaqat. (Photo courtesy of Ryan Bierle.)

RIGHT: Bill Jones, MD, leads the class to the next scenario along the Ernst Ridge Trail.



then collapse near the top of the first big ridge.

I dutifully dropped to a sitting position before lying back, groaning and breathing irregularly, and complained about chest pain. Immediately, the students descended, asking where it hurt, could I remember where I was, was I hot or cold, was I taking medications, did I have a family history of heart trouble, and so on. I held my breath.

They removed my backpack, did CPR — without the mouth-to-mouth — and pretended to shock me with an Automated External Defibrillator, or AED. Then, they discussed how they were going to get me out. Helicopter? Moore reminded them about the time and trouble that would take.

They decided they would need to carry me, or if I could walk, assist me in walking back down a considerable distance to an ambulance at Rio Grande Village — if they were able to call or radio one to come — and then wait the 30 minutes necessary for the ambulance to arrive.

There was no cell service.

The first group continued their hike and left me there for the next group, about 15 minutes behind, and I repeated the same act. Same conclusion: They had to get me down.

As I was not a faculty member, but merely an observer, a couple of students later told me they initially thought my act might be real. Throughout, I kept thinking about things that were very real. I wasn't far from where two people, a 14-year-old boy and his stepfather, died the previous summer, overcome by the heat while hiking. I kept thinking about the sheer helplessness they must have felt.

And last year on this same class trip, the group passed a Boy Scout troop going the opposite way. As the last of the class finished the hike, they encountered rangers mobilizing to head back up the trail. One of the scout leaders had suffered a heart attack. He didn't survive.

Now, there's a bright yellow emergency AED box posted on the trail that the troop had hiked. →

Strength in numbers

Other scenarios during the trip depicted anaphylaxis from a bee sting; high altitude cerebral edema, known as HACE, and high-altitude pulmonary edema, or HAPE; a climbing fall with reported neck and ankle pain; altered mental status with seizure; and a particularly bizarre case of multisystem trauma with gunshot wounds. That one resulted in a femoral artery laceration requiring a tourniquet in addition to treatment for a “sucking chest wound,” or an open hole to the chest. The premise was that the bullets inadvertently came from a hunter’s rifle, as hunting occasionally is used to cull non-native species in the area.

Among the takeaways from students working through this broad range of emergency scenarios: an appreciation of the assessment

process required to reach consensus on the best response to life-threatening situations; the sobering reality of the high stakes involved with decisions made; and an understanding of the strength and resolve that can result when you learn to trust and work with others to save lives.

“I had no idea that a course like this existed, but I’m really glad it does,” said Natasha Paul of Austin, who jumped at the chance to take it, even though she plans to specialize in obstetrics and gynecology. She since was matched to Vanderbilt University.

“So much of what we do is in the hospital facility where we have all the resources that we need,” she said. “What do you do without an ER or an operating room right in front of you? And so, I liked that this class gave you the opportunity to learn what medicine might be like without those resources.”

THE EVOLVING NATURE OF EMERGENCY MEDICINE

While emergency medicine always has been about recognizing someone who needs immediate care and knowing how to resuscitate or save them, much about it has changed and continues to evolve.

Heat-related emergencies, prevalent in South Texas, are a good example, said **Ralph Riviello, MD, MS, FACEP**, chair and professor of the Department of Emergency Medicine at The University of Texas Health Science Center at San Antonio.

“Years ago, the notion of using temperature bags with ice water and submerging someone in cold water as a means to treat severe heat illness was thought to be ineffective and too dangerous,” Riviello said. “But as we have seen more cases and are able to test this hypothesis, this has been shown to work, and with good results. So, it has become a best practice.”

Similarly, there are new ways to warm patients in cold-related

emergencies. And now, those measures safely can be combined with practices like defibrillation, which uses an electrical current to improve heart rhythms — previously thought too much of a risk for patients while submerged in water to cool or warm them.

“These are the kinds of exciting things we see in emergency medicine, with researchers questioning how we used to approach emergency treatments and testing new ideas to determine better ways to impact patients,” Riviello said.

New technologies include use of an ECMO, an extracorporeal membrane oxygenation machine, to remove blood from a patient and oxygenate it. Care for sepsis patients who develop major infections has changed by giving them a higher-dosage fluid IV to maintain blood flow and support nutrients getting to body tissues, along with early and appropriate IV antibiotics.

In cases of life-threatening blood loss, the university’s emergency department is a national leader in the effort to get blood into the hands of EMS crews, with its model now practiced across the country. The department maintains a close relationship with EMS partners, who

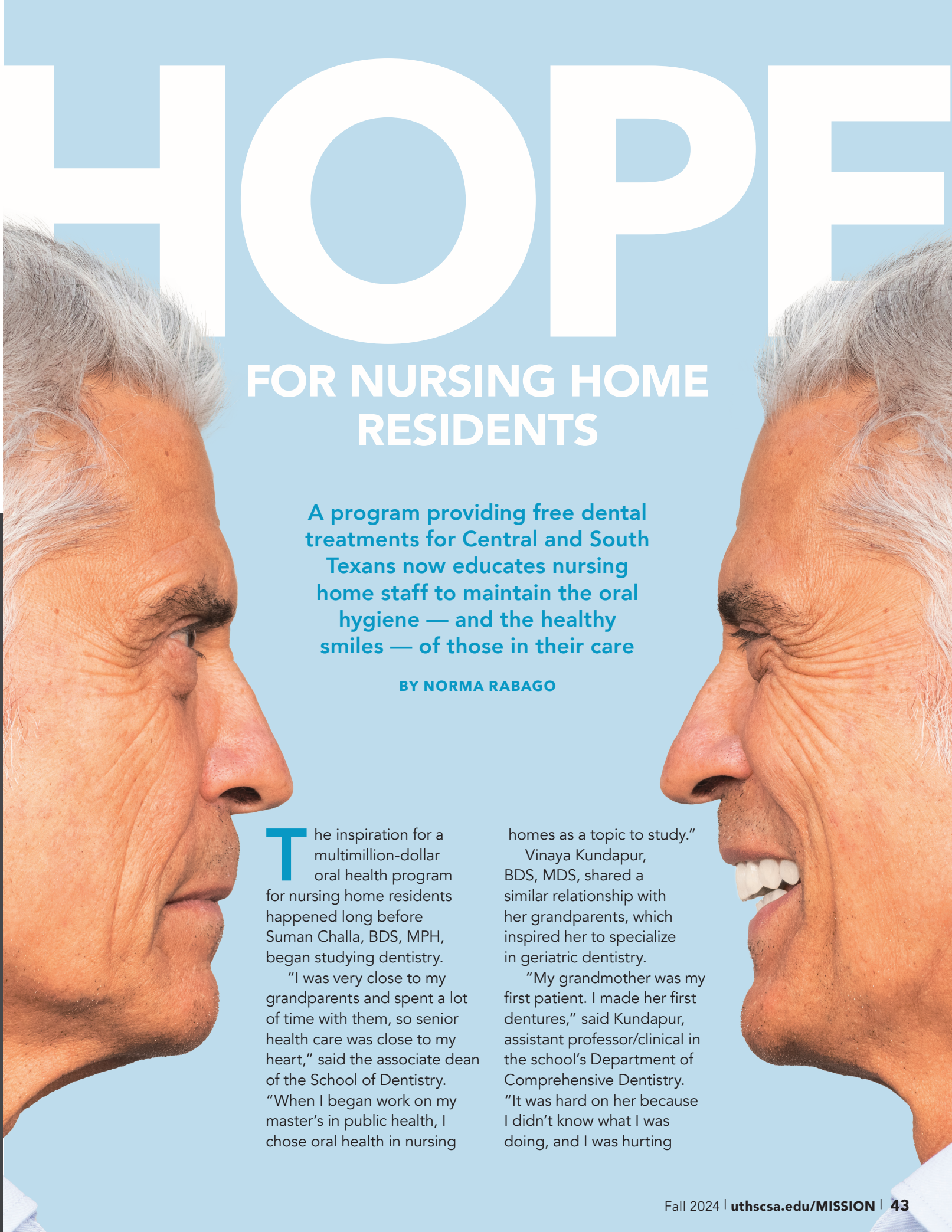
Riviello says know how to distribute patients so that no one facility is overly burdened.

Emergency medicine advances also extend to what no longer is done, like administering certain medications to cardiac-arrest patients that since have proven ineffective. Theories of resuscitation likewise are evolving.

With more widespread needs for emergency care — some related to an increasing occurrence of severe weather events — Riviello believes a bigger focus will be on how to handle disasters with new technologies that help locate and get to people faster, or get them to facilities more quickly, along with new techniques and treatments.

As response readiness relates to wilderness or austere medicine, Riviello has this advice for outdoor enthusiasts.

“The key is always to be prepared. Do your research,” he said. “This includes knowing your own limitations if you haven’t done something before so that you can be realistic about what you will need. Have a plan, including letting others know where you are going so that if they don’t hear from you, they can be your cry for help.”



FOR NURSING HOME RESIDENTS

A program providing free dental treatments for Central and South Texans now educates nursing home staff to maintain the oral hygiene — and the healthy smiles — of those in their care

BY NORMA RABAGO

The inspiration for a multimillion-dollar oral health program for nursing home residents happened long before Suman Challa, BDS, MPH, began studying dentistry.

“I was very close to my grandparents and spent a lot of time with them, so senior health care was close to my heart,” said the associate dean of the School of Dentistry. “When I began work on my master’s in public health, I chose oral health in nursing

homes as a topic to study.”

Vinaya Kundapur, BDS, MDS, shared a similar relationship with her grandparents, which inspired her to specialize in geriatric dentistry.

“My grandmother was my first patient. I made her first dentures,” said Kundapur, assistant professor/clinical in the school’s Department of Comprehensive Dentistry. “It was hard on her because I didn’t know what I was doing, and I was hurting



“We were there to provide complete comprehensive care for patients who may not have seen a dentist in 15 to 17 years.”

Vinaya Kundapur, BDS, MDS, assistant professor/clinical, Department of Comprehensive Dentistry



“When you are improving oral health, you are improving overall health.”

Suman Challa, BDS, MPH, associate dean, School of Dentistry

her. But she told me not to stop. She said she could tolerate the pain because I was learning, and she wanted me to learn in the best way.”

Challa and Kundapur took the love, compassion and empathy they learned from their grandparents and turned it into an oral health program conducting more than 5,000 dental procedures at 58 nursing homes across South and Central Texas.

“We were there to provide complete comprehensive care for patients who may not have seen a dentist in 15 to 17 years,” Kundapur said.

HOPE, or the Holistic Oral Health Program for Elders, was a three-year program funded by a \$5.7 million grant from the Centers for Medicare and Medicaid Services (CMS) that provided comprehensive dental care for nursing home residents without dental insurance. While funding for the clinical phase of the program ended in 2023, a smaller CMS grant has allowed it to transition into an education program for nursing home staff and caregivers.

HOPE on the road

During its clinical phase, the HOPE program consisted of a team of 10: two dentists, two hygienists, two public health students and four dental assistants. Together they covered a wide geographic area across Bexar County. Each patient’s care began with a cleaning and an assessment to determine the scope of work needed.

“We would prioritize what is best first. If they had an infection, we would ensure that was taken care of,” Kundapur said.

The team performed every procedure, from extracting teeth — sometimes as many as six to 10 teeth or root tips in a day — to making dentures. Many residents had compromised oral health due to dry mouth caused by medications and a history of significant medical conditions, Kundapur said.

“After scaling, we applied silver diamine fluoride as a preventive measure whenever possible. Root caries, often accompanied by periodontitis and tooth loss, were prevalent. We prioritized restoring these teeth. The only procedure not conducted was dental implants,” she said. “I would tell my patients that wrinkles and graying are part of aging. Graying is inevitable, but tooth loss is not.”

The team’s daily schedule was long and subject to unexpected change. After seeing all patients at one nursing home, the team moved on to another.

Some days were more challenging than others.

“There were moments when the team would go back to see a patient they saw six months ago and found the patient had passed away,” Challa said.

On those days, the team members leaned on each other for support. “But we knew in that last six months we helped them and made sure they had a better quality of life until the day they passed away.”

Improving health

According to Challa, the most significant outcome of the program was the difference healthy teeth made in the patient’s overall physical and mental health.

“When you are improving oral health, you are improving overall health,” said Challa.

He remembers one resident who isolated herself in her room with the lights turned off so other residents wouldn’t visit her and see the extensive work she needed on her teeth. When the dental work was completed, “she became a social butterfly,” he said.

“We changed their emotional well-being and improved their overall health with better nutrition and taking away the pain they endured,” Challa said. “It was transformative for them.”

One unexpected outcome was how the nursing home residents positively received the team.

“Typically, no one is jumping for joy to make an appointment with the dentist,” Challa said. “[The residents] were excited about making an appointment with us.”

Extending HOPE’s impact

With the HOPE program transition to an educational service in 2023, one dental hygienist and one dental assistant now teach nursing home staff how to maintain good oral hygiene among their patients.

The team of two meets with nursing home staff quarterly to provide themed training based on the real-life cases they saw during the clinical phase of the program to illustrate preventative measures. For instance, one training may show how to recognize infection, while another covers denture maintenance.

Another goal of the program is to help nursing home staff recognize a potential dental emergency or how to prevent one. The team also provides each patient with denture care kits and oral hygiene supplies.

Kundapur said that if the program had been done in reverse order, it might not have been as successful.

“Providing this oral hygiene education to the caregivers will help [patients] keep what we treated,” she said. 🌟

65+

According to the National Council on Aging, adults aged 65 and older are one of the fastest-growing populations in the United States.

80.8 MILLION BY 2040

The 65+ population will number 80.8 million by 2040. Yet among those in this age group, oral health is often neglected because of a lack of insurance or access to care.

10,000

During the past year, School of Dentistry students and the school’s dental practice, UT Dentistry, treated close to 10,000 older adult patients.

65%

Of those nearly 10,000 older adult patients treated, 65% did not have insurance.



A FINAL GOODBYE

IN MEMORIAM



Henrich served as dean of the health science center's Joe R. and Teresa Lozano Long School of Medicine from 2006 until 2009.

William L. Henrich, MD, MACP, who served as university president from 2009 to 2024, died March 14, 2024. He was 77.

In his 15 years as president, Henrich transformed UT Health San Antonio into a top-ranked academic health center.

He presided over the greatest period of expansion in the institution's 65-year history, punctuated by \$1 billion in ongoing construction projects that will change the city's health care and life sciences research landscape. A board-certified and fellowship-trained nephrologist, Henrich served as dean of the health science center's Joe R. and Teresa Lozano Long School of Medicine from 2006 until 2009, when The University of Texas System Board of Regents appointed him president.

Dedicated to preserving the core missions of health care education and biomedical research during uncertain economic climates such as the COVID-19 pandemic, Henrich consistently led the charge to augment the institution's clinical practices. The number of patient visits to all the institution's clinical practices, which includes UT Health Physicians and UT Dentistry, exceeds 2.6 million annually.

Meanwhile, he worked to increase the institution's research footprint and impact. UT Health San Antonio is the largest academic research institution in South Texas and is a primary driver of San Antonio's \$44.1 billion health care and biosciences sector.

The academic mission, so vital in training tomorrow's health care providers and researchers, was especially important to Henrich. He steered the creation of The University of Texas School of Public Health San Antonio, the institution's sixth school, initiated in collaboration with The University of Texas at San Antonio.

Speaking in April 2023, Henrich described the uniqueness and mission of the health science center.

"Our mission is to make lives better. That mission compels us to not allow ourselves to get fatigued, because what's at stake is a human life. Many human lives. That's why what we do comes from our hearts. That's why we can't allow ourselves to quit. If not us, then who will do it? People are depending on us."

Henrich is survived by his wife, Mary, their two children and their five grandchildren.



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