UT ARLINGTON

health

THE UNIVERSITY OF TEXAS AT ARLINGTON COLLEGE OF NURSING AND HEALTH INNOVATION

2017

RISING TO THE CHALLENGE

Cadiac Studies Give Heart

Researchers in the College of Nursing and Health Innovation are zeroing in on a major killer: heart disease.

CARING

Department of Kinesiology graduate research assistant Meghan Humphrey leads a weekly group fitness class at a research center for seniors on the UTA campus. The focus on aerobics and other exercises promotes an active lifestyle for seniors who want to increase muscle strength and flexibility.

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"We recognize that our work will change the lives of others."

In their 1994 book, *Competing for the Future*, authors Gary Hamel and C.K. Prahalad discuss strategic intent and using it to bring dreams to life.

Last year, The University of Texas at Arlington joined the elite ranks of R-1 Carnegie Classification "highest research activity" universities, fulfilling a long-sought goal. Through strategic intent, the College of Nursing and Health Innovation is supporting the University, thriving as a major research destination and leader in teaching and learning excellence.

Strategic intent has three main components: direction, discovery, and destiny. A sense of direction gives a unifying purpose to everything in the organization. For the College, that direction is the advancement of one of UTA's four strategic themes: improving health and the human condition.

We recently added a Ph.D. in kinesiology. This addition sets the stage for enhanced discovery in the future of health and science. This spring we expanded our master's in nursing programs online to increase access to highly qualified health care practitioners. We are also taking steps to expand our doctorate in nursing practice program online.

Our faculty and staff have a sense of destiny. We recognize that our work will change the lives of others. To that end, there is another important aspect of strategic intent present in our College: sharing. We empower people to use their knowledge and expertise to achieve the best outcomes. Our faculty and staff regularly work in teams to ensure that a diverse range of perspectives helps us arrive at the best decisions.

As you will see in this issue, together we have mobilized this concept of strategic intent and helped transform our College into one of the nation's leading producers of health care professionals.

Anne

Anne R. Bavier, Ph.D., RN, FAAN
Dean, College of Nursing and Health Innovation

Nursing students receive instruction in the College s Smart Hospital.

ROUNDUP

Research and academic insights

College becoming a faculty magnet

Many nursing programs around the country struggle to fill faculty vacancies. Indeed, the American Association of Colleges of Nursing estimates there is a 6.9 percent faculty vacancy rate. This faculty shortage makes it harder to produce a sufficient number of registered nurses to meet the nation's rising demand.

The College of Nursing and Health Innovation is bucking the trend. Nearly 30 full- and part-time faculty members joined the College at the beginning of the 2016-17 academic year. At the same time, the number of new full-time faculty has risen while that of part-time or adjunct faculty has dipped. In fall 2016, the College had 95 full-time, on-campus faculty members, up from 92 during the 2015-16 academic year and 87 in 2014-15. Meanwhile, the number of part-time, on-campus instructors has fallen over the last two years, with 45 in 2014-15, 43 in 2015-16, and 41 in fall 2016.

"We have an excellent reputation in the community, and many individuals interested in faculty positions seek us out," says Beth Mancini, senior associate dean and head of undergraduate programs. "When we have a specific need, we typically use word-of-mouth combined with targeted national recruiting."

Dean Anne Bavier says the College has also been strategic about grooming graduate students for the possibility of careers in academia. The College offers two doctorate nursing degrees. The Ph.D. is geared toward a career in academia. And while the DNP is more industry-oriented, many students still end up teaching.

"When I was hired, I saw terrific national certification rates," Dr. Bavier says. "I saw a budget that was adequate to do the work and had some flexibility in it. I saw leaders who, if challenged with a conceptual model or out-of-the-box thinking in any arena, sat back, thought about it, and went there."

Zui Pan joined UTA in fall 2016 from Ohio State University.

Combatting Disease

Noted professor takes on esophageal cancer

According to the National Cancer Institute, about 17,000 men and women were diagnosed with esophageal cancer in 2016. Nearly 37,000 live with the disease today. Esophageal cancer is difficult to treat. The five-year survival rate is less than 20 percent.

"The research effort in the United States on this deadly disease is not as intense as it should be," says Associate Professor Zui Pan, a noted esophageal cancer researcher who joined the College of Nursing and Health Innovation in August 2016. "This is a huge priority in the health care space."

Part of her interest is personal, as Dr. Pan has lost friends and relatives to the disease. Her background fuels her high research activity, and she's earned national recognition for her discovery of biomarkers for the cancer. To date, she has published more than 70 articles in scholarly journals and received nearly $2 million in grant funding from the National Institutes of Health, the National Cancer Institute, and others.

In recent years, Pan and her team have identified a protein, Orai1, that is strongly associated with esophageal tumor progression. The researchers are currently focused on trying to understand how the protein contributes to tumor initiation and development. Pan plans to evaluate the protein as a potential biomarker for esophageal cancer detection and prognosis. She hopes that this will lead to the development of more effective therapeutic interventions for esophageal cancer patients.

"Health care research is a major priority for both the College and UTA," says Paul Fadel, the College's associate dean for research. "As a result, we've declared war on some deadly diseases, including cancer. Zui is an important contributor to the fight."

Public health program debuts

The nation's rapidly aging population, coupled with a growing emphasis on prevention rather than treatment, is spurring demand for public health professionals trained in injury prevention, wellness, and disease control.

The U.S. Bureau of Labor Statistics projects there will be 250,000 job openings for public health professionals by 2020. The public health field encompasses a variety of roles, including health educators, health policy analysts, and industrial hygiene officers.

The College of Nursing and Health Innovation has responded to this demand by creating an undergraduate track in public health. Classes began in fall 2016. Initially, students will receive a bachelor's degree in exercise science with an emphasis in public health.

"This track addresses two overarching issues," says Rebecca Garner, clinical assistant professor of kinesiology and director of the program. "One is to train a diverse and competent public health workforce and the other is to help students develop an appreciation for population health, creating an informed populace."

The College expects to transform this program into a stand-alone bachelor's degree in public health by fall 2017 and to introduce a master's in public health within the next five years.

Interconnected Systems

Plumbing the connection between vascular function and bone health

Rhonda Prisby was one of the nearly 30 new faculty that joined the College in fall 2016.

In the body's vast network of interconnected systems, the function of one can impact the function of another in many ways—some of which have yet to be discovered. Uncovering those ways is an important focus of research for Rhonda Prisby. The associate professor and rising star in the Department of Kinesiology is working on a discovery that could shed light on the causes of some strokes, heart attacks, or other instances of cardiovascular disease.

Dr. Prisby found in 2014 that blood vessels in bone marrow progressively convert to bone tissue with advancing age. When that happens, there could be a loss of blood supply to the bone, which negatively affects the health of bone tissue. More recently, she discovered what appeared to be bone particles in the blood of every person in a small sample of people aged 26 and older.

"If you have these small particles of bone circulating in your blood, and some of them are large enough to clog up your smallest blood vessels, the question is, 'Are they contributing to strokes or heart attacks?'" Prisby says. "That's what we will look at next. First we have to confirm that it is bone. We believe it is."

Prisby's research on vascular function in bone is critical now because it relates to health issues that are prevalent in older populations. Over the next 10 years, the population of people age 65 and older throughout the world will increase by 236 million, according to the U.S. Census Bureau.

David Keller, associate dean and chair of the Department of Kinesiology, says Prisby's research—which largely involves animals—uses elegant techniques that are unique worldwide.

"Her study on the impact of vasculature on bone disease or the potential role it plays is extraordinary," he says. "She's really becoming a world leader in that area. She definitely complements our department, and we're excited to have her."

The Center for Online Education recently ranked the College of Nursing and Health Innovation's online master's degree program No. 19 on its list of **Best Online Master's in Nursing Programs**. UTA was the only UT System school to make the list, and one of only two universities in Texas.

Helping develop nursing leaders

Early in 2016, the College of Nursing and Health Innovation joined an elite group of U.S. nursing programs when it was selected by the Jonas Center for Nursing and Veterans Healthcare to participate in its nurse leaders program.

The program is part of a nationwide effort to increase the number of nursing faculty with doctoral degrees. Less than 10 percent of nursing faculty in the nation have doctorates, according to the American Association of Colleges of Nursing. As part of the program, doctoral students at each participating school are selected as Jonas Scholars. The scholars each receive an annual stipend of $10,000 a year for two years from the center.

"These scholarships help nurse educators like me reach the top of our profession as we prepare the next generation of care providers," says Ruth Bargainer, one of the four Ph.D. students chosen to join the College's inaugural Jonas Scholars.

In addition to Bargainer, who is studying the impact of simulation as an educational technique in nursing curricula, other scholars include Megan Harper, whose research interest is the success of nursing students; Cecilia Lijauco, who is studying disparities in cardiovascular health and outcomes among African-American women; and Elesha Roberts, who is researching the quality of life of older hypertensive African-Americans.

Health care's new center of research

Late last fall, UTA began construction on a 220,000-square-foot, glass-and-steel building on the southern edge of campus. The building will be a cornerstone of the University's research efforts to advance health and the human condition, one of the core themes of UTA's Strategic Plan 2020: Bold Solutions | Global Impact.

The Science and Engineering Innovation and Research (SEIR) building symbolizes a new chapter in the history of both the College of Nursing and Health Innovation and the University, which has recently joined the elite ranks of the nation's top research universities.

Within this building, research scientists from various disciplines throughout the University will work together on a broad spectrum of health care research projects.

"By working side by side in this amazing collaborative facility with scholars from other backgrounds, our faculty will be even better positioned to take gigantic strides in advancing health care," says Duane Dimos, UTA's vice president for research.

Robotic Assist

Nurses' aide of the future could be a robot

Nurses could soon get help with everything from taking vital signs to lifting patients—from a robot.

"This is not replacing nurses. It's about assisting nurses," says Deborah Behan, a clinical associate professor in the College of Nursing and Health Innovation. "Workplace injuries are very common for nurses because they are constantly pushing and pulling, and their backs can easily be injured. A robot may be able to prevent back injuries."

Dr. Behan is developing the robot with a team of researchers. Her collaborators include Texas Health Resources, the UTA Research Institute, and former UTA faculty member Dan Popa, who is now with the University of Louisville. The team's work is funded by a $999,946 National Science Foundation Partnerships for Innovation grant.

One year into the three-year partnership, the team has developed a machine that does not yet look like a person, but resides in a lab that resembles a hospital room. The robot is being designed to take on functions such as sitting with confused patients, pushing a bed down the hall, fetching water for patients, lifting and turning patients with the nurse, and pushing an IV pole for a patient post-surgery while charting the event in the electronic health record.

All of these functions could help nurses continue working without injury, ensuring greater care to patients. Beth Mancini, senior associate dean for education innovation, says the collaboration could encourage more research across departments at UTA.

"It bodes well for future collaboration to address important problems in health care," Dr. Mancini says.

Deborah Behan and the robotic aide her team is developing.

When Love is a Battlefield

Two faculty members look at PTSD in new moms

Priscila Caçola (left) and Cheryl Anderson play with a baby in a campus lab area.

Most everyone is familiar with post-traumatic stress disorder (PTSD) in war veterans or police officers. But few people are aware that new mothers may experience PTSD, particularly mothers of premature and low birth-weight infants.

Two faculty members, Cheryl Anderson, associate professor of nursing, and Priscila Caçola, assistant professor of kinesiology, are working to tackle this malady. They are developing a pilot study for an intervention that will be tested on 40 new adult mothers and their infants. The two will make home visits and perform assessments of the mothers and infants over an 18-month period.

Mothers with premature infants often develop symptoms of depression and potential PTSD. Their babies are also more likely to have developmental delays, says Dr. Caçola, an expert on infant motor skills.

Numerous published studies have focused on PTSD among adult childbearing women, but only a few studies have tested interventions to reduce symptoms of birth trauma and PTSD.

"We anticipate that the intervention will reduce the mothers' PTSD symptoms and improve the infants' developmental skills," says Caçola.

Dr. Anderson, who has published articles in several scholarly journals on birth trauma and depression among adolescents and adults, says a few hospitals are starting to look for symptoms of depressions in new mothers, but not for symptoms that could lead to PTSD.

"Because symptoms suggesting later PTSD are missed, treatment is misdirected," says Anderson.

Eventually, this study could help adolescent and teenage mothers. If the intervention works successfully with adults, it will be tested on a group of adolescents for improvement in their mental health.

The College of Nursing and Health Innovation saw **enrollment gains** in the 2015-16 academic year. Nursing enrollment increased by 26 percent, while kinesiology enrollment increased by 10 percent. Total enrollment is about 21,000.

Spreading cheer

The merger of the College of Nursing and the Department of Kinesiology two years ago brought together two distinctly different academic divisions with a common goal: improving health through teaching, research, and service.

Efforts to create a unified, cohesive team sparked several ideas for creating synergy. One of these ideas led to the creation of the Spirit Team in fall 2015.

The Spirit Team is a dynamic group of 25-30 students, faculty, and staff who volunteer their time to design events that enhance the College of Nursing and Health Innovation.

"This provides opportunities to get involved," says Rebecca Garner, clinical assistant professor of kinesiology, who also oversees the team. "It provides an arena for all of us to work together, but in a completely different way."

The team has supported events like Homecoming and Health Professionals Night at the basketball game, which attracted students, faculty, staff, and alumni.

Recent graduate Taylor Smith played a nurse in a UTA ad when she was 5.

Grown-Up Goals

From playing nurse to becoming one

Taylor Smith remembers very little about making a print ad for UTA's nursing program as a 5-year-old.

"I remember my mom and other people telling me what to do," she says. "I didn't know it was going to be an ad."

The ad shows little Taylor, a stethoscope draped around her neck, listening to the heartbeat of another child.

Smith didn't see the black-and-white ad until the fourth grade at her school's nursing office. She saw it over and over again as she got older.

Early this winter, that ad came full circle. In December, Smith graduated from the College of Nursing and Health Innovation with a bachelor's degree in nursing. She works in a DFW-area hospital and plans to return to graduate school to pursue a master's degree and a women's health nurse practitioner certification.

Smith, whose mother Pamela has worked at the College for nearly 20 years, decided to become a nurse when she was in sixth grade. Her mother was hospitalized following surgery, and Smith was impressed by the professionalism and empathy of the nurses.

"The nurses she had were really nice," she says. "They had a lot of compassion. They interacted regularly with my mom, dad, and grandmother."

Before graduation, Smith worked part-time as a patient care assistant in the oncology unit at Plaza Medical Center in Fort Worth. The experience, while emotionally trying, has only heightened her love for the nursing profession.

"I go in and help patients and families," she says. "I love the fact that I can make a big difference by doing simple things like talking to people and giving them medication."

Increasing diversity in nursing

At Denton Regional Medical Center, Saul Castillo works as a registered nurse in the Intensive Care Unit. He is one of only two bilingual health care professionals there.

Although larger hospital systems in the Dallas-Fort Worth area have a more diverse staff, there still exists a great need for bilingual nurses, particularly Hispanic nurses, says Castillo, president of the Dallas chapter of the National Association of Hispanic Nurses (NAHN).

Latinos comprise 17 percent of the nation's population, but account for less than five percent of registered nurses.

Castillo, who is enrolled in the College of Nursing and Health Innovation's RN to BSN program, is working with members of NAHN to attract more Latinos to the profession.

At a gala last fall, the association gave $1,000 scholarships to three nursing students. The association hosts community events and plans to spend more time in high schools talking to students about opportunities in health care, particularly in nursing.

To strengthen outreach, Castillo is working to raise the group's profile.

"A lot of people don't know who we are or what we do," he says. "We are reaching out to the schools and different hospitals."

Serving the Underserved

Schweitzer Fellow empowers a vulnerable community

Early in 2016, doctoral student Elesha Roberts became the College of Nursing and Health Innovation's first Schweitzer Fellow, an honor bestowed on outstanding graduate health care students around the country. Fellows are required to spend hundreds of hours addressing the health needs of underserved populations.

Roberts spent much of last year clocking these hours working with hypertensive elderly African-Americans in a San Antonio community where health care resources and savvy are in relatively short supply.

She conducted workshops on topics ranging from the rights of patients to probe doctors about the finer points of medicine to how eating and exercising with a partner can keep a person on a path toward optimal health.

"Elesha saw a problem that we may think we've addressed in acute care—assuming people will follow through at home—only to find out that in that community, the follow-through isn't happening at all," says Deborah Behan, a clinical associate professor of nursing who advises Roberts on her Schweitzer Fellowship projects. "We have to think about the walls of [medical] institutions where there is acute care and move out from there: How do we relate to people? How do we help them improve their health in their own communities?"

Roberts says the fellowship has sparked ideas for broadening her horizons as a health care provider. It has also transformed her into a researcher. She is now trying to determine how her work as a Schweitzer Fellow can become the catalyst for a full-fledged—and fully funded—scientific study.

"I can really see this going into other vulnerable communities," says Roberts, a registered nurse with 13 years' experience and a clinical assistant professor of nursing at the University of Texas San Antonio Health Center. "I've put together a template that can easily be adapted."

Larry Nelson, associate professor of kinesiology, is transforming physical education in Dallas and Fort Worth schools with Dancing Classrooms. The program builds social awareness, confidence, and self-esteem in school children through dance.

Elesha Roberts earned a prestigious Schweitzer Fellowship.

Beyond gender barriers

The first thing Brian Chitimira noticed when he took his Introduction to Nursing class was that he was the only guy in that section.

"I wasn't okay with that," says Chitimira, a junior nursing major from Grand Prairie.

An aspiring nurse anesthetist, he decided to do something about it and formed the Male Student Nursing Association. The group has nearly 50 members. At least once a month, they gather to hear speakers from the health care industry and connect with upperclassmen and mentors who are registered nurses.

Although nursing remains an overwhelmingly female-dominated field, the number of men in the profession has risen sharply in recent decades, and men make up nearly 10 percent of registered nurses.

Thomas Dombrowsky, a clinical assistant professor of nursing who advises the association, says the group is an important resource for male nursing students.

"Nursing is traditionally considered to be a female profession," Dr. Dombrowsky says. "We can work to dispel that notion and to show the public and other students at UTA that there are men in nursing."

Stalking a Killer

Kinesiology: On the frontline of the battle against cardiovascular disease

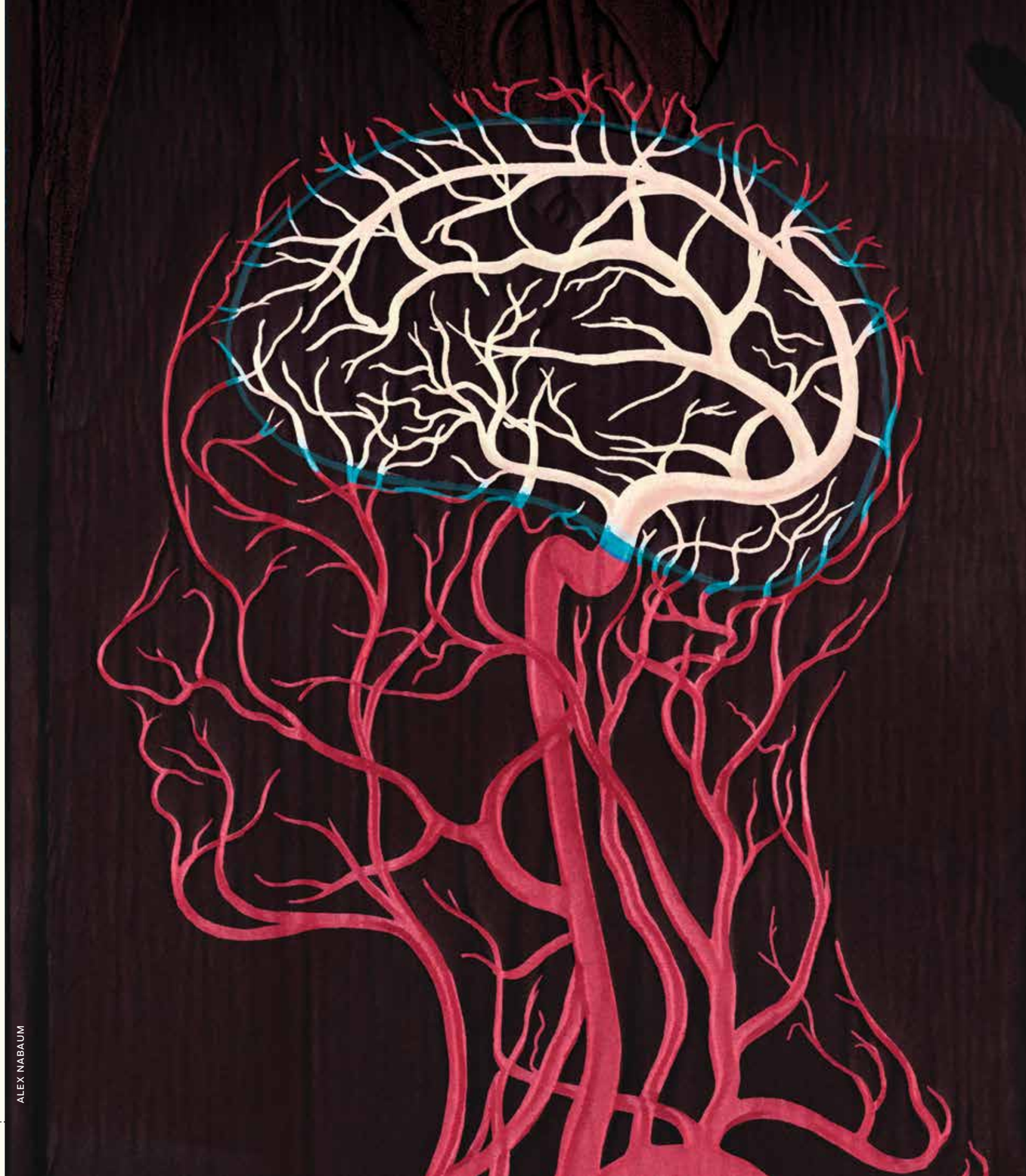
BY CHASTITY PRATT-DAWSEY

Cardiovascular disease is the leading cause of death worldwide, and the risk is higher for certain populations. For example, heart disease is the number one killer of women, and hypertension-related ailments account for 20 percent of all deaths among African-Americans. Over one-third of adult Americans are obese and face increased risk of cardiovascular disease.

Whether it's hypertension, heart attack, or stroke, the College's Department of Kinesiology has built a team of researchers who are working to better understand the mechanisms underlying these cardiovascular diseases. The team's ultimate goal is to discover novel therapeutic strategies that combat these life-threatening conditions.

"We've got the cardiovascular system covered," says Michael Nelson, assistant professor of kinesiology.

Dr. Nelson joined the department last year and is studying root causes of heart disease in women. The new and growing team also includes Associate Professor Matthew Brothers, who joined the college last year from UT Austin. His work focuses on mechanisms of impaired vascular function known to be present in populations with cardiovascular disease. And in 2015, the department hired Paul Fadel, a prominent integrative physiology researcher and expert in neural cardiovascular control. Dr. Fadel also serves as the College's associate dean for research and director of clinical translational science. In 2016, he was awarded a $1.7 million grant by the National Institutes of Health to study the role of the autonomic nervous system in cardiovascular disease



ALEX NABAUM

and high blood pressure in patients with chronic kidney disease. Fadel is also working with David Keller, associate dean and chair of the Department of Kinesiology, on a study that investigates differences in vascular responses in blacks and whites in blood pressure regulation. The Kinesiology Department's recent recruit, Rhonda Prisby, studies the interaction between blood vessels and bone. Recently she received an American Heart Association grant to investigate how inflammation in the bone marrow contributes to blood vessel dysfunction, loss of patency, and arterial emboli.

These experts work individually and collaboratively, making a team that together has been awarded millions of dollars in grants from sources such as the National Institutes of Health and the American Heart Association. It's the kind of innovative research that contributes to one of the pillars of UTA's Strategic Plan 2020: Bold Solutions | Global Impact: improving health and the human condition.

The Vascular Expert

The cardiovascular system has thousands of miles of arteries and veins that deliver oxygen and nutrients to every cell, carting away carbon dioxide and waste along the way. It functions because the heart and peripheral blood vessels are working together.

Dr. Brothers is pursuing several studies on blood vessel function and implications in a variety of conditions, such as strokes, hypertension and Type-2 Diabetes.

"There are many reasons for heightened risk," says Brothers. "We're trying to identify the potential reason why blood vessels aren't functioning properly. The next step is to identify some life style interventions to delay the progression and hopefully reverse this dysfunction."

African-Americans and obese individuals experience higher rates of heart disease. A primary problem for these populations is dysfunction of blood vessels in the brain and other vascular beds. Brothers' research focuses on how blood vessels function and what makes vessels dilate or not. Impaired dilation of vessels can lead to hypertension, stroke, atherosclerosis, and heart attacks.

"This work may shift the paradigm of our approach in treating such diseases."

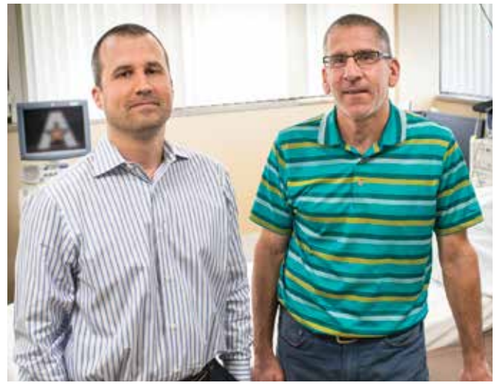
An ongoing area of investigation in Brothers' lab is the role of oxidative stress in impaired brain and peripheral blood vessel function. Work recently published by his group shows the therapeutic potential of antioxidant therapy in at-risk individuals.

This work has led to several collaborations between Brothers and Nelson. One such collaboration focuses on the effect of a high fat meal on vascular function. Another study, funded by the Center for Translational Medicine at University of Texas Southwestern Medical Center, is investigating the effect of obesity and subsequent bariatric surgery on brain vascular health and cognitive function.

The Heart Expert

Dr. Michael Nelson is particularly interested in the heart. Nelson—who is also an adjunct professor of bioengineering and a visiting faculty scientist at Cedars-Sinai Medical Center in Los Angeles—is conducting research that could help women with a rare form of heart disease and people whose heart conditions leave them unable to manage simple tasks.

In 2016, he received a four-year, $308,000 grant from the American Heart Association to study the root causes of a condition that damages blood vessels in the women's heart. Symptoms of this coronary microvascular dysfunction often include chest pain, shortness of breath and fatigue. Diagnoses frequently elude cardiologists, who have traditionally relied on major blockages of blood vessels to dictate clinical courses of action.



Most women afflicted with the coronary artery condition have several things in common, including risk factors such as diabetes, hypertension, and obesity. Nelson's previous research has demonstrated that the heart does not relax well in this group.

"Our hypothesis is that the impaired relaxation of the heart is directly related to coronary microvascular dysfunction and contributes to the progression of heart failure," Nelson says.

He and his team will use MRI techniques to test the hypothesis. This technique allows for optimal assessment of both heart and blood vessel function.

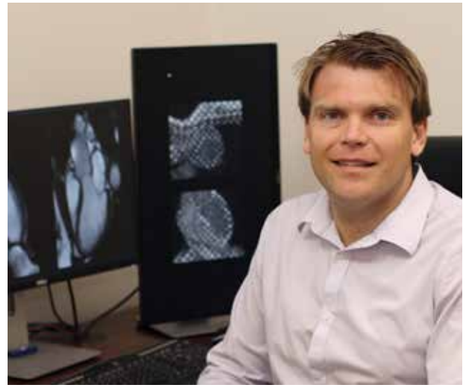
In addition, Nelson is working with several other researchers—Mark Haykowsky, Paul Fadel, and Paul Bhella from the College of Nursing and Health Innovation; Hanli Liu and Fengha Tian from the College of Engineering; and Robert Gatchel from the College of Science—to develop other novel imaging techniques to study blood flow regulation in patients with heart failure. The team received one of four seed grants UTA awarded last August to interdisciplinary research projects.

"This is an incredible cross-discipline collaboration," Nelson says. "It simply could not be done anywhere else in the world but here at UTA."

The Bone Expert

Skeletal tissue is highly vascularized and Dr. Rhonda Prisby is deciphering the interaction between blood vessels and bone in health and disease. Prisby, also an adjunct professor of bioengineering, is conducting research that could aid in the treatment of diseases with low bone mass and impaired fracture healing by examining how blood vessels contribute to bone health or bone decline.

In 2016, she received a two-year, $150,000 Innovative Research grant from the American Heart Association to study the role of inflammation on vascular dysfunction in bone and the generation of bone-like blood particles. Her two recent discoveries—the conversion of blood vessel into bone and bone-like particles in the peripheral circulation of rodents and humans—serve as the basis for this award. The loss of vascular function in bone may lead to impaired delivery of oxygen and nutrients to the skeleton. Circulating bone-like blood particles may contribute to diseases such as heart attack and stroke.



From left: David Keller, Paul Fadel, Rhonda Prisby, Michael Nelson, and Matthew Brothers.

"We are looking at whether inflammation in bone marrow contributes to blood vessel dysfunction, the conversion of blood vessels into bone, and the generation of bone-like blood particles," she says.

Since the diagnosis of vascular pathology within the skeleton is difficult in the clinical setting, Prisby's research may lead to diagnostic techniques capable of assessing risk of emboli, particularly in those of advanced age.

Prisby will work with several clinical researchers in the Department of Kinesiology, such as Fadel, and the College of Nursing and Health Innovation to further characterize the presence of bone-like blood particles in patients with cardiovascular disease.

"This research is extremely exciting and may alter our understanding of the development of heart and strokes," Prisby says. "Additionally, this work may shift the paradigm of our approach in treating such diseases."

The Nerve Experts

The sympathetic branch of the autonomic nervous system plays a crucial role in controlling the peripheral vasculature. Importantly, impairments in this system contribute to hypertension.

Nearly half of African-American adults are at risk of developing hypertension, a rate significantly higher than that of any other group in the United States.

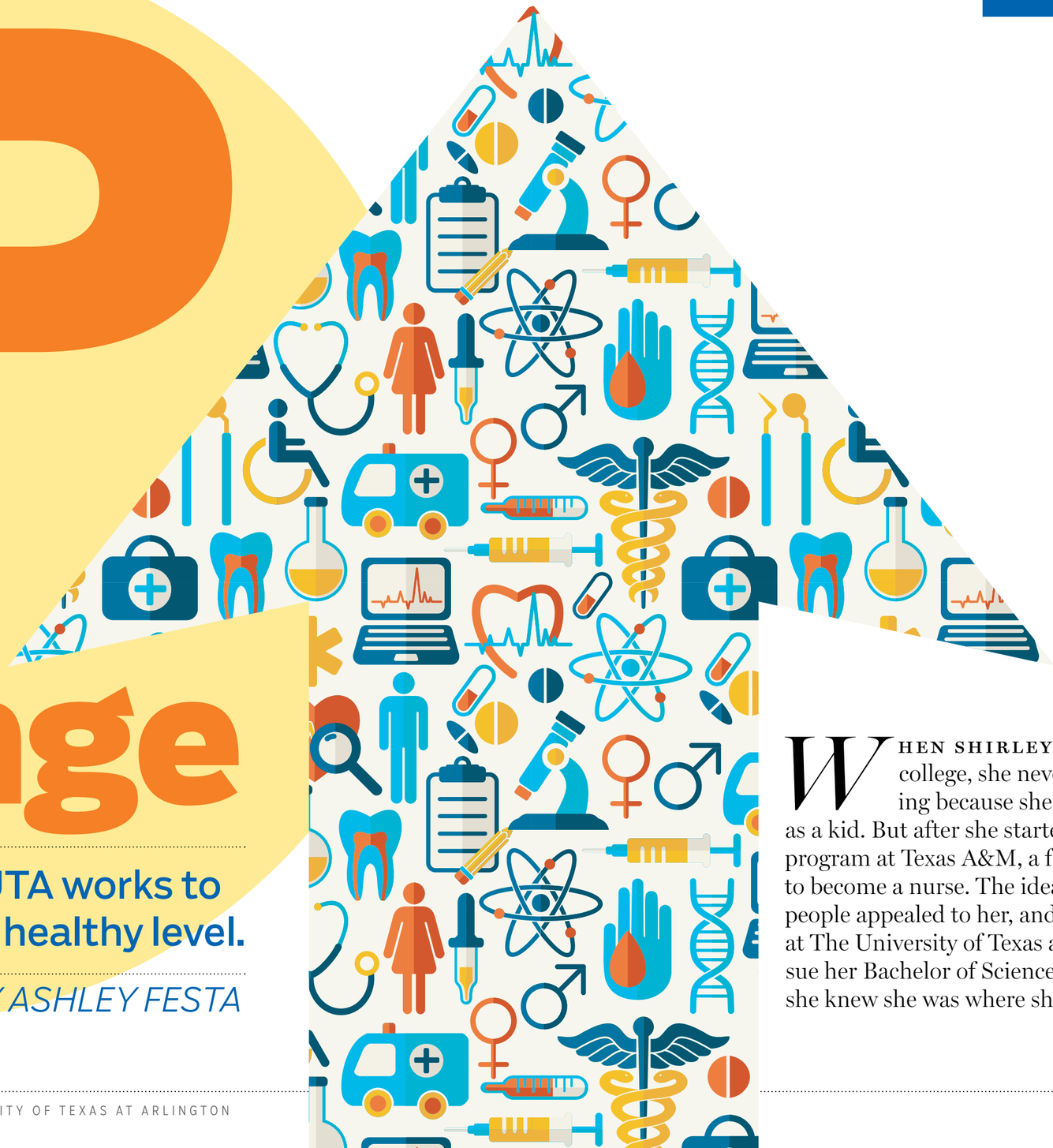
Keller and Fadel, both experts in neural control of the circulation, are working to address this important issue. Last year, they were awarded a $376,000 National Institutes of Health grant, with which they will investigate differences in vascular responses in blacks and whites in blood pressure regulation both at rest and during exercise. Keller and Fadel say insights gained through their studies will help to better understand the underlying causes contributing to the greater occurrence of hypertension in African-Americans. This work will hopefully contribute to reducing the prevalence of hypertension in this group.

An important aim of this study is to examine the role of family history of high blood pressure. Keller says a thorough understanding of biological mechanisms associated with hypertension in African-Americans could have significant ramifications for all racial and ethnic groups.

The addition of these integrative physiologists in the Department of Kinesiology puts UTA on the cutting edge of basic and applied cardiovascular research in health and disease.

"When you look at what type of work is being funded, there's much more attention and allocation of resource to teams of investigators working together to solve common problems," says Keller. "Through our alignment with the University's strategic themes, our researchers are extremely well-situated for continued success and contribution to the understanding of health and disease across the lifespan."

UP to the Challenge



In the face of a national shortage, UTA works to put the number of nurses back at a healthy level.

BY ASHLEY FESTA

When Shirley Martin went to college, she never considered nursing because she had a needle phobia as a kid. But after she started the engineering program at Texas A&M, a friend encouraged her to become a nurse. The idea of taking care of people appealed to her, and when she enrolled at The University of Texas at Arlington to pursue her Bachelor of Science in Nursing (BSN), she knew she was where she was meant to be.

For the past 28 years, Dr. Martin has sat at children's bedsides as a pediatric nurse, doing her best to relieve their fears.

"I feel like I make a difference in the world," Martin says, a clinical instructor at UTA and a full-time pediatric perioperative nurse at Cook Children's Medical Center. "I have taken care of a lot of kids with needle phobias. Because of my own experience, I understand what a big deal that is."

Like Martin, many nurses feel called to the profession. It's a vocation oriented toward the whole patient, says Anne Bavier, dean of the College of Nursing and Health Innovation and president of the National League for Nursing (NLN). Nurses are sensitive to the emotional needs of patients and their families. They help patients learn how to use crutches and to understand when and how to take their medication. They can help patients address such daily life issues.

UTA is the top producer of baccalaureate-degreed nurses in Texas.

In fact, a recent Gallup poll ranked nursing as the nation's most trusted profession.

However, nurses often don't have the time to follow up with patients to make sure all those additional needs are met. Facing a rising nursing shortage, nurses at hospitals and other health facilities often find there aren't enough of them to go around.

To address the shortage, the Institute of Medicine published a report in 2010 outlining five areas that must be confronted to ensure the health care system will be sufficiently staffed with fully educated nurses. The recommendations included allowing nurses to practice to the full extent of their education and training; promoting baccalaureate and advanced degrees; allowing nurses to lead in the fields of health care policy, research, and translating research into evidence-based improvements to the practice; promoting diversity; and improving data collection on health care professionals regarding whether they work and what roles they fill.

UTA's College of Nursing and Health Innovation—the largest nursing program in Texas and the largest nonprofit nursing school in the country—rose to the challenge. UTA has created pathways to help more nurses further their education. Technology is playing a big role in making that happen, with both online programs and simulated training experiences, allowing nontraditional and nonlocal students opportunities to earn nursing degrees. The College also offers two doctoral nursing degrees, so nurses wanting to further advance their knowledge have the option to pursue research and science or specialized practice and leadership in the field.

While there will always be more work to do, UTA continues confronting the challenge head-on.

THE NURSING SHORTAGE

It's been a problem for decades, and it could get worse. The U.S. Census Bureau reported there were more than 46 million people age 65 or older as of 2014. By 2024, the youngest baby boomers will reach their 60s, continuing to burden the health care system with the chronic illnesses that comes with old age. And not only is the general population graying, so is the nursing workforce. The vast majority of nurses are female, and many entered the field decades ago when women had fewer career options. Today, more than half of registered nurses are 50 or older, and the average age of Texas nurses is 45. As more RNs reach retirement, the shortage may increase.

The employment of RNs is expected to grow 16 percent by 2024 according to the Bureau of Labor Statistics, a much faster rate than other occupations. That growth will put the number of new nursing jobs in the millions.

But it's not a lack of women and men desiring to become nurses that will cause jobs to go unfilled. A critical component of addressing the shortage is the ability of colleges and universities to prepare enough nurses to fill those vacancies. The two biggest hurdles these institutions face, Dr. Bavier says, are too few faculty members and not enough clinical sites for students to gain the hands-on experience they'll need in the field.

The first problem also stems from age: The American Association of Colleges of Nursing (AACN) reported in 2014 that the average age of doctorate-holding faculty is older than 50, and older than 60 for full professors. Master's degree-holding faculty are, on average, older than 50 as well. As faculty retire, the shortage of educators may also rise.

This problem presents a catch-22: The fewer faculty there are, the fewer students can be admitted into nursing programs. Then schools aren't able to graduate as many students, which results in fewer nurses who can become faculty members in the future.

The second issue compounds the problem. The more students enrolled in nursing programs, the more clinical sites are needed to complete their degree. Too few clinical placements limit the number of students who can be admitted into nursing programs. Thus the paradox starts again.

RESPONDING TO THE PROBLEM

Along with other universities across the country, UTA also faces the task of finding enough doctorally prepared faculty to educate the number of students who apply. Nationally, almost 70,000 qualified applicants were turned away from nursing schools because there weren't enough faculty to teach them, according to the 2014 AACN report.

To combat the problem, the College turned to technology nearly a decade ago. The College offers numerous online courses, allowing faculty to teach more students without overcrowding classrooms. Simulated clinical experiences cut the number of hours students need to spend at hospitals, therefore reducing the burden on facilities that provide hands-on training. As a result, UTA accommodates more than 13,000 students in its nursing program and is the top producer of baccalaureate-degreed nurses in Texas.

UTA continues to broaden its online curriculum. The College has offered the BSN and some Master of Science programs online for years, and in March, several additional nurse practitioner degrees were added—allowing more students to earn advanced degrees in rural areas and out of state.

The online programs are accelerated, meaning that instead of 16 weeks of coursework, these classes take only five to 10 weeks. The benefit for students is the ability to graduate sooner, but the University does not sacrifice excellence for speed.

"The quality and content are the same, just delivered differently," says Judy Leflore, associate dean for simulation and technology, who also oversees the graduate nursing program. "We use the same metrics to evaluate online and on-campus programs."

Dr. Leflore stresses the accelerated online classes aren't for everyone. Because students must devote 15 to 20 hours per week to their academic studies, she recommends they not work at all or only part time if absolutely necessary.

Online classes serve another purpose as well. In addition to allowing more students to enroll, they also provide access for distance learners, especially those wanting to pursue advanced degrees.

"The shortage of nurses varies by geographic region of the country and of Texas," says Beth Mancini, the College's senior associate dean for education innovation, who oversees undergraduate studies. "In Houston and the Dallas-Fort Worth metroplex, the shortage isn't as bad because there are lots of schools. It's worse in rural areas, where shortages can be very high."

For that reason, she says, averages and generalizations of statistics obscure the severity of the shortage in underserved regions. With online classes, students can earn a degree from where ever they're located, increasing the likelihood they will remain and practice in those underserved areas.

Dani Dillard, an online student who expects to earn her BSN in December, lives in Argyle, Texas, about an hour's drive from UTA. In addition to her coursework, she works part time and cares for her family, leaving little room for a long commute to school. But she says she feels just as close to her professors as she would in on-campus classes.

A student works with a manikin at the Smart Hospital.

Students learn emergency care during a field training session.

"Many supportive structures help online students feel connected and supported," says Dillard, who plans to continue working in a pediatric emergency department. "You feel as if you're getting an in-person education. It takes dedication and commitment, but the educators are with you every step of the way to help you achieve your goals."

UTA professors emphasize the importance of strong relationships with students in the online setting.

"I became a faculty member when online education was exploding, and with the change in delivery mode comes the need to identify mechanisms to keep students feeling they are part of a larger community of learners," says Patricia Thomas. She earned her Ph.D. from the College in 2011 and now teaches neonatal nurse practitioner courses at UTA full time. "In addition to discussion forums, I utilize web conferences, wikis, Blackboard instant messenger, and journaling to facilitate communication in the online courses I teach."

HANDS-ON TRAINING SOLUTIONS

Because UTA increased its ability to enroll more students, it also had to find a way to accommodate the need for clinical training. Again the University turned to technology, with a Smart Hospital that includes simulators for students to practice their skills before working with real people. This groundwork reduces the number of hours needed in clinical placements.

"With a simulated experience, you don't have to touch a patient the first time you try a new skill," says Beverly Malone, CEO of the NLN. "It's like with pilots—you can crash the plane without anyone getting hurt. With the virtual simulation, you've experienced all types of scenarios by the time you get to a hospital. You have also had the opportunity to reflect on what you did wrong without anyone losing their life."

During simulations, students encounter events such as a patient going into cardiac arrest or having a baby. Such experiences prepare them to make good judgments during clinicals, Dr. Malone says.

The Smart Hospital also integrates technology into the curriculum. UTA was one of the first schools to build a virtual hospital setting which includes emergency, surgery, adult ICU, neonatal ICU, pediatric care, and delivery rooms.

In the beds lie programmable manikins—mannequins that talk, get fevers, vomit, deliver babies, and simulate many other human bodily functions. As the nurses care for their patients, faculty observe from a one-way window and remotely adjust the manikins' settings to respond to the students' actions. While online students don't have access to the Smart Hospital, the facilities where they earn their clinical hours offer simulation opportunities.

"This technology doesn't replace clinical experience, but it makes it go more smoothly," Dr. Mancini says. "When the students get into the clinical experience, they don't need as many exposures to a situation to demonstrate competency. They can interact more confidently with real patients."

UTA also has established partnerships with hospitals to create flexible schedules for clinical hours. Working weekends or evenings allows students to log the same number of hours in fewer months. These partnerships also extend to underserved areas, allowing long-distance students to avoid time-consuming commutes.

ACCELERATING ADVANCED EDUCATION

Nurses who advance their education bring many benefits to the workplace and the health care system, according to a 2013 report by the Robert Wood Johnson Foundation. Improved patient outcomes have been linked to nurses with bachelor's degrees or higher, the report found.

UTA's nursing programs make it easier for working nurses to advance their education, says Ceil Flores, assistant dean of the College of Nursing and Health Innovation. The RN-to-BSN and RN-to-MSN programs allow licensed, practicing registered nurses to earn a degree using their professional working experience as credit for clinical hours. UTA also offers MSN-to-Ph.D. and BSN-to-Ph.D. options to facilitate advancement to the doctoral level.

The Doctor of Nursing Practice (DNP) is also a doctoral degree, but instead of focusing on research, it aims to prepare nurses for leadership, health policy, and specialized clinical practice. In some cases, nurses with DNP degrees opt for careers in academia.

Bavier stresses the importance of determining which doctoral course is appropriate for students wishing to pursue terminal degrees.

"People go into nursing with a passion for helping others," she says. "Part of what we do in the admission process is help people determine how to make an impact in a way that's most aligned with their life goals."

ATTRACTING TEACHER-RESEARCHERS

While the number of nurse educators is low, the number of faculty members with doctorates is lower still. Among full-time nurse educators, only about 33 percent hold either a Ph.D. or DNP, according to a 2015 NLN report. In Texas, less than one percent of nurses hold a doctorate, the Texas Center for Nursing Workforce Studies reported in 2015.

Salary remains a barrier to enticing nurses into the classroom. The average salary of a nurse practitioner is more than $90,000, according to a 2014 American Association of Nurse Practitioners report. But the average salary for a master's-prepared assistant professor is less than $75,000.

It's a problem for universities across the country, and Mancini says finding money to hire new faculty remains a challenge for UTA. But the University is still moving forward. The administration has provided funding to make new hires for the past three years, allowing about 10 professors to be added to the faculty, Bavier says.

Some educators, like Martin, are drawn to expanding evidence-based practice in nursing. Even before she was employed at UTA, she led a scientific study theorizing that children could be positively influenced by therapeutic suggestions while under anesthesia. She received funding of more than $50,000 to conduct her study on children who had just received a tonsillectomy, a procedure that often caused young patients to wake up screaming in pain.

"Patients are still sleeping under anesthesia, so we used that window of time to speak soothing phrases to the child," Martin says. "We discovered that intervention significantly lowered pain scores 30 minutes after removal."

Now, in addition to her full-time job at Cook Children's Medical Center, Martin teaches an online course and continues her research interests, including postoperative pain in children, bio-behavioral interventions in the perioperative setting and obesity in children.

UTA's nursing programs make it easier for working nurses to advance their education.

A VERSATILE CAREER

Besides getting to conduct original research, there are other reasons nurses decide to earn advanced degrees and go into teaching. Some nurses feel burned out by the stress of the hospital, and they may prefer more consistent working hours with weekends and holidays off. Many also enjoy educating future health professionals.

"I love getting to mold the next generation of nurses and watch the transformation from the first day you meet them to the last day after clinical," Dr. Flores says. "They blossom."

Mancini, with over 40 years' nursing experience and 13 as an educator, agrees. "That's one of most wonderful aspects of nursing—you can do all sorts of things," she says. "As a nurse, I loved my job because I could make an immediate impact. As an administrator, I made an impact by leading nurses who are caring for patients. Now as an educator, it's the best job in the world. The faculty are teaching nursing students who are going to go out and provide that care that I used to give. I've loved each aspect of being a nurse."

Kinesiology degree offers flexibility

When Brandon Esianor matriculated at UTA in fall 2010, he was certain he wanted to become a physical therapist. An avid sportsman, he figured physical therapy would be a natural fit for him. But after learning about how far an exercise science degree could take him, he decided to pursue a career in medicine.

Esianor graduated from the College of Nursing and Health Innovation with an honors degree in exercise science and a minor in chemistry in 2014. He also received the Wayne Duke Outstanding Student Leadership award, which goes to one student each year and comes with a scholarship.

"Brandon is such a unique and exceptional young man," says Brad Heddins, a clinical assistant professor of kinesiology and one of Esianor's former instructors. "He has such a strong sense of gratitude. He loves UTA and attributes his success to the education he received here."

Esianor says he developed relationships with several of his instructors, including Dr. Heddins, Professor Mark Ricard, and Associate Professor Judy Wilson.

"They made us aware of the different ways you could go with this degree," he says. "Dr. Heddins in particular was helpful in teaching clinical skills like stress testing and blood pressure monitoring."

Now a third-year student at Montgomery Medical School at the University of Texas Health Science Center at Houston, Esianor says he has classmates from places like Harvard and he's holding his own. His goal is to become an otolaryngologist.

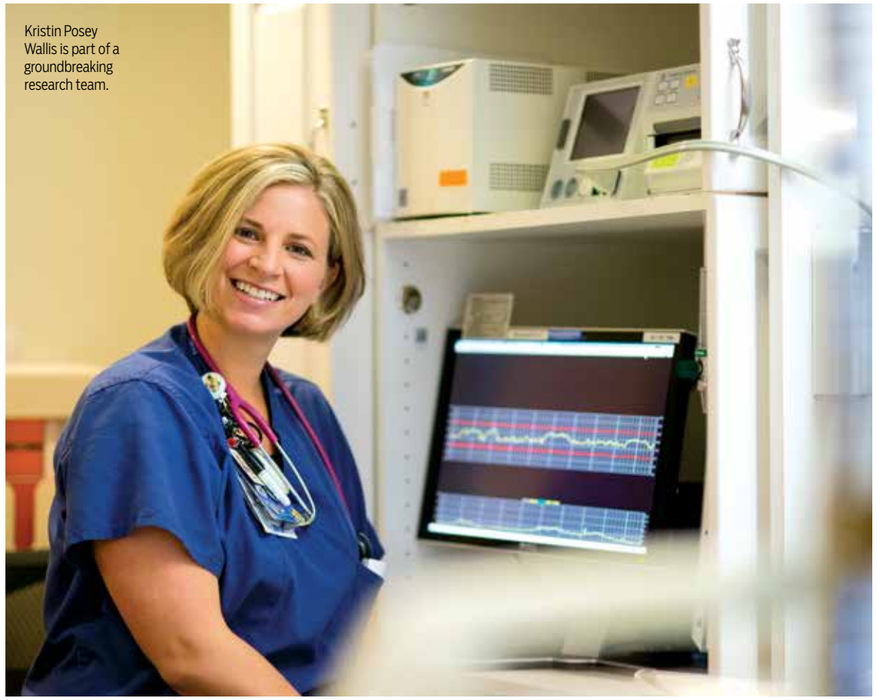
"A kinesiology degree gives you so many options," he says. "There are so many routes you can take."

Brandon Esianor's kinesiology degree helped open the door to medical school.

Accomplished alumni

Alumna Helps Provide Hope

New research initiative supports women struggling with infertility



Kristin Posey Wallis is part of a groundbreaking research team.

Kristin Posey Wallis, a registered nurse and 2004 nursing graduate, is part of a team at Baylor Scott & White Research Institute focused on aspiring mothers.

She's helping run a clinical trial that aims to give women with uterine-factor infertility—a condition that means they have nonfunctioning or nonexistent uteruses—the chance to become pregnant and carry those pregnancies to term. The medical team will implant wombs in 10 women with uterine factor infertility.

The work, which will eventually include pregnancy inductions, builds on a clinical trial conducted in Sweden during a span of more than 10 years. That trial resulted in seven successful womb transplants and five live births.

As part of the womb transplant team, Wallis serves as the uterine transplant research nurse coordinator. In her role, she has screened about 300 donors and recipients. She also coordinates and completes all appointments with physicians in preparation for surgery and after. Much of her work centers on patient care: educating the patients and the staff caring for them and supporting patients from screening and intake through surgery and recovery.

"I was excited to be chosen and honored to work with some of the brightest physicians at Baylor," she says. "I had to hit the ground running as we worked quickly to open the study up for screening. At times there is more work than hours in the day, but I really enjoy what I'm doing."

The team has completed the first four living donor uterine transplants in the United States. One patient is progressing well and shows no signs of rejection.

"It's been such an amazing opportunity to be part of something so innovative and new," Wallis says. "I learn so much each day about research, transplants, and myself."

Scores of College of Nursing and Health Innovation students, faculty, staff, and alumni flocked to the UTA campus for **Homecoming 2016**. They participated in the parade, renewed acquaintances at a CONHI tailgating party, and cheered on the Mavs at the evening basketball game.

Shaping the future of health care

In 20 years as a nurse, Sayda Major ('06 MSN) has developed another passion: teaching.

Each semester, Major, an acute-care nurse practitioner at Parkland Hospital, serves as a preceptor to two nursing students. In the summer, she takes on four.

"Most preceptors take on one student," explains Major, who is also a clinical instructor in the College of Nursing and Health Innovation. "I take two at a time because there's such a need."

Last September, in recognition of her devotion to mentoring and teaching students, the Texas Nurse Practitioner Association named Major Preceptor of the Year.

"I love to see a student who is completely green at the beginning learn to be a provider," she says. "They have the confidence and understanding to become a unit provider and are actually functioning like seasoned providers and practitioners. These people are going to take care of me later."

Kendra Stephen speaks at the 16th annual Dream Makers Scholarship Luncheon.

Worldwide Impact

A scholarship could transform health care a world away

As a child growing up in Nigeria, Kendra Stephen's life changed when her grandmother was struck by a debilitating illness that robbed her of her ability to walk. After trying unsuccessfully to find a suitable health care facility in their home country, her parents arranged for her to come to the United States for medical treatment.

"The professionalism and devotion of the health care workers inspired both me and my twin sister, Nina, to become nurses," says Stephen, who was born in the Detroit area but raised in Nigeria. "The U.S. hospital where my grandma was receiving treatment provided her with at-home nurses. I was awed by the devotion, time, and effort that were poured into caring for my grandmother. It was like nothing I'd ever seen before."

That experience also inspired her to strive to spearhead change in Nigeria's nursing profession. Stephen plans to work as a registered nurse stateside for a few years before enrolling in graduate school. Then, she and her sister plan to return to Nigeria to become health care change agents.

When that day comes, it will be in part because of the generosity of donors. While a student in the College of Nursing and Health Innovation, Stephen distinguished herself academically and earned a prestigious Dream Makers scholarship.

Since 2002, the Dream Makers Scholarship program has benefited promising students who go on to positively impact the lives of their patients and effect change in the health care industry.

Stephen spoke at last year's Dream Makers Scholarship Luncheon, held annually the first Monday in March. The event is an opportunity for students to meet the donors who have helped enable them to make their dreams come true.

"Through this scholarship offer, I found an inner joy and extra motivation to keep striving for my dreams," says Stephen, who along with her twin graduated last May. "I am inspired by the fact that many individuals—specifically our donors—see potential in my schoolmates and me and strongly bet on our success."

Your gift in support of the College of Nursing and Health Innovation is an investment in our students and faculty, our research and programs, and our continued success. If you are interested in giving, we invite you to contact the Dean's Office at 817-272-4793.

Faculty giving

Lianne Tonry was the kind of nurse that was easy to talk to and hard to forget.

When Tonry, a clinical assistant professor in the College of Nursing and Health Innovation, died in 2016, Becky Baird wanted to honor her colleague. Tonry, who joined the faculty in 2013 after a career that included serving as a hospital's director of clinical education, died just four months after Baird's uncle, James Orr, passed. Both Tonry and Orr were veterans.

Using the money her uncle left her, Baird, an assistant clinical professor, established the Tonry/Orr Veterans Endowed Scholarship in Nursing. The $25,000 permanent endowment benefits military veterans pursuing a pre-licensure Bachelor of Science degree in nursing.

The pre-licensure program is designed for students who are not registered nurses and do not have associate degrees in nursing from community colleges. Like the rest of the university, the College reaches veterans in an environment that welcomes and embraces the needs of current and former servicemen and women. Because of its longstanding commitment to the education of veterans, Military Times ranked UTA the top Texas university for veterans in 2017.

Baird is not alone in her generosity. A large portion of the money raised from donors last year was given by faculty and staff.

CLASS NOTES

1970s

Kathy Schoonover-Shoffner ('79 BSN, Nursing) is the director of the Nurses Christian Fellowship and editor-in-chief of the *Journal of Christian Nursing*.

1980s

Brad Chasteen ('80 BS, Physical Education) is the boys' varsity basketball coach at Midway High School in Waco. Previously, he coached at South Grand Prairie and Coppell high schools, the Texas Lightning AAU program, and for a homeschool team, the Flower Mound Rebels.

Roy Rudewick ('89 BA, Physical Education) received the Frank Medina Award from the Southwest Athletic Trainers' Association for significant contributions to the profession. He is UTA's associate athletic director for sports medicine and the primary trainer for men's basketball.

1990s

Virginia Lynch ('90 MSN, Nursing) was recognized for her efforts in forensic nursing when she received the John R. Hunt Award in 2016 at the Annual Scientific Meeting of the American Academy of Forensic Sciences in Las Vegas. She serves on the American Academy of Forensic Sciences Initiative in Humanitarian and Human Rights and lives in Colorado.

Charlene Parham ('98 BA, Exercise and Sports Studies) is principal at Crownover Middle School in Denton.

2000s

Sandi McDermott ('01 BSN, '06 MSN, Nursing) has been appointed to the advisory board of the Texas State Alliance of YMCAs. She is director of Tarleton State University's outreach center, which is located on the Navarro College Midlothian campus.

Zach Cazares ('02 BA, Kinesiology) is principal of Bonner Elementary School in Tyler.

Amber Horton Miller ('02 BA, Kinesiology) received her Doctor of Physical Therapy degree from Florida Gulf Coast University in May. She has been a physical therapist for eight years, working in acute care, rehab, assisted living, skilled nursing, and outpatient settings. She works for the Indian River County School District.

Jakki Opollo ('04 BSN, '08 MSN, '12 PhD, Nursing) received the Outstanding Nursing Graduate award from the Ethel Ransom Humanitarian and Cultural Club in November 2016.

Sayda Major ('06 MSN, Nursing), a nurse practitioner at Parkland Health and Hospital System, was named the 2016 Texas Nurse Practioners (TNP) Preceptor of the Year at the 28th annual TNP conference in San Antonio.

2010s

Stephanie Spahis ('13 BSN, Nursing) is a cardiology nurse at Children's Medical Center of Dallas. Previously, she worked in the neonatal ICU at Medical City Dallas.

Lashanda Putman ('14 BSN, Nursing) was recognized as a Top Nurse by the International Nurses Association. She currently serves patients at the Shepherd Center in Atlanta. The Shepherd Center specializes in spinal cord and brain injury rehabilitation along with medical research as the top rehabilitation hospital in the nation.

Maria Moreno Quinones ('14 BSN, Nursing) serves as a member of the board of the Dallas chapter of the National Association of Hispanic Nurses.

Josh Rader ('14 BS, Exercise Physiology) is offering the Fit-STEPS for Life exercise program for cancer patients at his fitness center in Abilene.

Coretta Sigler ('15 BSN, Nursing) received an outstanding nursing graduate award from the Ethel Ransom Humanitarian and Cultural Club at the organization's 83rd anniversary gala.

Kaitlyn Smith ('14 BSN, Nursing) joined Cook Children's Health Care System in 2015, where she works as a nurse in the neonatal ICU in Fort Worth.

SPOTLIGHT ON

LIZ JOHNSON
('78 BSN, '89 MSN, Nursing)

In November, Liz Johnson was recognized as a Distinguished Alumna at UTA's annual Distinguished Alumni Awards ceremony. She is a nationally recognized chief information officer at Acute Care Hospitals and Applied Clinical Informatics for Tenet Health. As CIO, she provides the strategic vision and tactical planning for many systems used across all Tenet's acute care hospitals. A master of science in nursing graduate, Johnson has spent the last seven years leveraging her health care experience to advocate for the U.S. health care reform movement in Washington, D.C. In October, she received a fellowship in the American Academy of Nursing.

Mark Haykowsky works with a FitSTEPS participant.

Making cancer patients stronger for the fight

A couple of times each week, several cancer patients make their way to a lab at the Maverick Activities Center on the UTA campus. There, graduate students and a professor work closely with them on range of exercise strategies designed to help patients get their strength and health back.

Known as FitSTEPS for Life, the program is a customized nutrition and exercise regimen that helps cancer patients increase endurance and mobility while overcoming the debilitating effects of chemotherapy treatment. FitSTEPS is tailored to the individual and includes aerobic exercise, strength training, and stretching techniques.

The initiative is the first of its kind in the Fort Worth-Arlington area. Although the services are free, patients must be referred by their physicians. Gary Kimmel, a physician and emeritus board chairman of the Cancer Foundation in Tyler, Texas, founded FitSTEPS for Life, which has 15 centers statewide.

"Cancer patients tend to have very low fitness to the extent that performing activities of daily living can become quite difficult," says Mark Haykowsky, a professor of nursing and a renowned cardio-oncology researcher who oversees the FitSTEPS program on the campus. However, studies show that exercising during chemotherapy may be an effective method for targeting cancer cells and may also mitigate the damage that some of these drugs could potentially have on patients' hearts.

"Research has shown massive benefits from exercise for cancer groups, and not just for the body," says Rhys Beaudry, a kinesiology doctoral student and FitSTEPS trainer. "There are benefits in sleep, dietary habits, mood, and how you deal with chemotherapy."

Although FitSTEPS began operating on the UTA campus in February 2016, the University has had a relationship with the program for years. Undergraduate kinesiology students have completed their required internships at various FitSTEPS sites in the area.

"This is a good opportunity for the community, our students, and our faculty," says David Keller, associate dean of the College of Nursing and Health Innovation and kinesiology chair. "If you live in the Arlington, Grand Prairie, or Mansfield areas and are in need of this program, we offer a much more convenient option."

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