

NORTH TEXAS HEALTH & SCIENCE

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Magazine of the UNT Health Science Center

Focus on healthy aging, pg. 4

Robotic manikins help students learn, pg. 17

Students gain insight into addiction at Ford Center, pg. 33



MESSAGE FROM THE PRESIDENT

At the UNT Health Science Center, where the best begins for health, our educators, researchers, and health care providers are racing to meet the needs of a rapidly aging population. We are proud that we prepare our graduates with knowledge of geriatrics. Our researchers are in the forefront of the fight against Alzheimer's disease and other dementias. In our clinics, our health care providers use innovative, comprehensive, and compassionate approaches to care for seniors.

In these pages you will meet some of the people who are building a brighter, stronger future for us all. You'll also hear from seniors who mentor our students. They impart not only medical experience but perhaps even more important, life lessons about resilience and empathy.

You'll also meet the people who work long hours in our laboratories to find ways to treat and someday prevent the cognitive decline that robs seniors and their loved ones of memories and quality of life. You'll learn how we approach medical care and treatment of seniors, from a comprehensive point of view. We'll also introduce two of our alumni who personify compassion as they care for the elderly.

Then you'll get a peek inside our Patient Simulation Lab, where we use computer-controlled manikins to help students learn how to respond to a racing heartbeat, fever, or other symptoms.

You'll meet a couple whose generous gifts make it possible for our students to learn about addiction treatment at the Betty Ford Center, a topic not addressed at many medical schools.

We have a new advertising tagline, "Where the best begins for health." You may have seen it on billboards around town. I hope you'll agree it reflects not only pride in our heritage as a city and a university, but also the promise of a healthy quality of life.

We hope you enjoy this issue. Please contact us if you would like more information.



Scott B. Ransom, DO, MBA, MPH





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SCIENCE CENTER

Healthy Aging



Sid O'Bryant, PhD, addresses seniors at a community forum

Aging and Alzheimer's disease: One of UNTHSC's areas of strength

Someone once said “old age is no place for sissies,” and it was a short trip from that statement to the idea that aging equals debilitation. But that’s a misconception. Dozens of geriatrics experts at the UNT Health Science Center are happy to report that aging is not an illness.

Exactly how healthy aging comes about is an increasingly urgent issue. Today, 40 million people are age 65 and older, and in the next five years, 14 million more will turn 65.

The nation will need many more physicians to care for this aging population. Estimates are that by 2030, more than 33,000 geriatricians – physicians who specialize in caring for the elderly – will be needed, but only about 8,800 will be available.

Other health professions are racing to catch up with demand. Only 516 physical therapists have been certified as geriatric clinical specialists by the American Physical Therapy Association, which has created a special section to train and support those who work with seniors.

To help address these issues, the UNT Health Science Center is providing solutions for healthy aging through education, research, patient care and a community civic council.

The good news is that Americans are living longer than ever, reaping the benefits of health care advances, more access to health care, better nutrition and more exercise.

Life expectancy has soared, from about 49 years at the beginning of the 20th century to nearly 70 years in 1955. That was the midpoint of the Baby Boom – 78 million people born between 1946 and 1964.

Now, the Baby Boomers are retiring, and the improvements in longevity mean that most of us are much less likely to die of infectious diseases like influenza or pneumonia.

The bad news is that many of us will be debilitated by chronic conditions such as Alzheimer’s.

A person with cognitive decline, Alzheimer’s or another dementia may have a severely diminished quality of life – unable to use words, communicate with loved ones, prepare meals, handle money or manage medications. Alzheimer’s and other dementias are personal and heartbreaking, and they touch us all.

Seven out of 10 people with Alzheimer’s live at home, the Alzheimer’s Association reports. Caregivers may become physically and emotionally exhausted and may have to curtail work schedules or end their careers altogether. These caregivers often are part of the “sandwich generation,” responsible for children and also for aging parents or grandparents.

“I believe in what’s happening here at UNTHSC. We moved an entire laboratory here from across the state.”
~Sid O'Bryant

Consider:

- Alzheimer’s costs Americans \$36 billion annually in lost productivity, according to the Centers for Disease Control and Prevention.
- More than 15 million Americans provide unpaid care valued at \$210 billion for persons with Alzheimer’s and other dementias.
- Alzheimer’s accounts for 34 percent of Medicare spending, or about \$91 billion in 2005.
- Alzheimer’s is among the top 10 leading causes of death.

In the broader spectrum of aging, challenges include:

- Stretching a fixed income to cover medications and care
- Limited mobility and lack of transportation
- Finding one health care provider qualified to treat multiple conditions and diseases
- Shortage of physical therapists
- Shortage of physician assistants



Janice Knebl, DO, MBA

Education

Training medical students to treat the older patient

Janice Knebl, DO, MBA, one of the nation's leading educators in geriatrics, is well-known for her energetic approach to life as a professor and caregiver. Knebl, who has been with UNTHSC 24 years, envisioned several years ago that every student in the Texas College of Osteopathic Medicine (TCOM) receive training in geriatrics, a sub-specialty of internal and family medicine that focuses on the unique, complex needs of the older patient. Her goal is to teach all students how to treat older patients with skill, sensitivity and dignity—the kind of treatment she says she hopes to receive herself one day.

Knebl's experience and accomplishments made her highly qualified to take on this educational challenge. She is a professor of medicine and the Dallas Southwest Osteopathic Physicians Endowed Chair in Clinical Geriatrics, and chief of the Division of Geriatrics within Internal Medicine. She also is chair of the National Board of Osteopathic Medical Examiners, which tests the medical knowledge of aspiring osteopathic physicians seeking licensure. Knebl is a practicing geriatrician with UNT Health and medical director for several Fort Worth senior living centers, including the James L. West Center and The Stayton at Museum Way.

“We accelerate the infusion of geriatrics through all four years of medical school and on into residency training.”

~Janice Knebl

Knebl's efforts to broaden the knowledge of all TCOM students led to the establishment of the Reynolds Foundation-funded program called Geriatric Education and Training in Texas (GET-IT). Knebl is project director. GET-IT, now in its

fourth year, trains students, graduates and practicing physicians to better care for an aging population.

- First- and second-year TCOM students are introduced to older adults by evaluating and monitoring senior patient mentors in their homes through the Seniors Assisting in Geriatric Education (SAGE) program.
- In their first and second years, TCOM students take mandatory Geriatrics coursework. Their third year features core clerkships that include integrated geriatrics training. In their fourth year a clinical rotation exposes them to the continuum of elder care.
- A geriatrics fellowship program trains physicians in geriatrics after their residency.
- Three residency program directors have attended concentrated geriatrics fellowships at UCLA to help them learn how to better integrate geriatrics into residency programs.
- Some 30 percent of the continuing medical education offered to family physicians by UNTHSC's Professional and Continuing Education programs help physicians to identify and treat dementia and cognitive decline in older adults.

“What sets us apart with GET-IT is that we emphasize lifelong learning for physicians across the continuum of geriatrics,” said Knebl. “We accelerate the infusion of geriatrics through all four years of medical school and on into residency training.”

Many physicians who have been practicing for several years were never trained in geriatrics, she said. “Through our continuing medical education programs, we help these physicians understand and treat the senior population.”

Seniors as mentors

SAGE advice helps medical students understand aging

Sarah Valliere, a second-year TCOM student, and Leo Vroman, nearly 100 years old and an accomplished scientist and writer, are learning from each other. They are part of a mentoring program that pairs older adults with medical students, adding a crucial dimension to the students' medical education while also benefiting the community.

UNTHSC's Seniors Assisting in Geriatric Education (SAGE) program pairs students, typically in their 20s and often unfamiliar with the elderly, with mentors at least 65 years old. SAGE is one of the largest and most comprehensive such programs in the nation.

The students spend one-on-one time with their mentors, visiting them in their homes, whether that's a traditional house, retirement community or other arrangement. Students make eight visits to their mentor over two years, providing free blood pressure checks, a limited physical exam, nutritional assessment, home safety evaluation, discussions of community resources and advanced care planning.

It's been a win-win for both the students and their mentors. Invariably the students' eyes are opened to the complexities of geriatrics. And they're amazed by these seniors' resilience of body and spirit.

"Mr. Vroman is 97. He fled from the Nazis in Holland in World War II, then he survived a Japanese POW camp. Yet his outlook is so completely positive," Valliere said. "He writes books, and he just finished a new one. He has truly inspired me." The appreciation is mutual.

"Feedback from mentors is overwhelmingly positive," said SAGE director David Farmer, PhD, MA, assistant professor of Internal Medicine. "They enjoy the companionship of the students, plus they like to 'give back.' They know they are influencing future physicians."

One of the mentors, Clarabele Dodson, 86, believes so strongly in her two students, Linh

Nguyen and Nathan Mielke (both TCOM '14) that she says, "I'm putting off getting sick until these two are doctors."

Valliere said SAGE filled a gap in her experience. "Most of my grandparents died early," she said. "But because of SAGE, I definitely respect this population more."

The students also can see the osteopathic philosophy play out in real people's lives.

"Osteopathic physicians put a strong emphasis on health promotion and prevention, especially via exercise and nutrition," Farmer noted. "Students can see personal examples of how people age differently and with better outcomes."

Mentors are referred by a Meals on Wheels caseworker, UNT Health's Patient Care Center, retirement communities, churches and civic groups.

It's not uncommon for the students to go above and beyond their assignments to find resources to help a mentor. Farmer recalled that in one mentor's kitchen, students saw a sunken place in the floor that the mentor "had to sort of dance around, so he wouldn't fall." The students had their churches contribute materials to fix the floor.

More than 700 students, including nearly 70 from the Physician Assistant Studies program, and 538 mentors have participated in SAGE so far. SAGE is expanding to include more students, including more physician assistant students and Physical Therapy program students. Starting this fall, some of the SAGE students will work in interprofessional "triads" in a trial program. The triads will consist of a TCOM student, a physician assistant student and a physical therapy student.

Perhaps SAGE will have the same effect on them as it had on Valliere. "Although I started my medical education thinking I would go into emergency medicine, SAGE has turned me on to geriatrics," she said, "and now I'm looking to explore that."

“Students can see personal examples of how people age differently and with better outcomes.”

~David Farmer



"She's the most active person I know," Nathan Mielke said of Clarabele Dodson, who mentors Mielke and Linh Nguyen, both TCOM '14.



"We emphasize safe independence and help with planning for the future."
~Janice Knebl

Janice Knebl, DO, MBA, with patient

Patient care

Advocating a team approach to older adults' care

The problems of aging can be complicated, often requiring a team approach. UNT Health, the physician faculty practice of the UNT Health Science Center, is uniquely equipped to assist. Its clinics use a comprehensive, team approach to diagnose and treat seniors called the Gerontology Assessment and Planning Program (GAP). The team includes a multidisciplinary professional staff of:

- physicians who are board certified in geriatrics
- social workers
- geriatric nurse practitioners
- psychologists

These professionals treat the entire spectrum: frail older adults, active healthy seniors and everyone in between.

An assessment may include a review of:

- medical history and physical health
- medications
- functional and nutritional status
- cognitive, emotional and psychological wellness
- social service needs, such as care and safety in the home, social network support, access to resources and planning for long-term care

Referrals are made for associated medical services such as:

- specialist exams
- psychiatric/psychological assessment
- physical or occupational therapy
- dental care
- sensory deficit evaluations

“We outline options for the patient and family,” said Janice Knebl, DO, MBA. “We take into account practical matters like financial status and their social network.

“We emphasize safe independence and help with planning for the future. You become a victim if things are not planned. Having a plan means control. If you have a plan, you can make choices.”

Appointments are available at UNT Health, 817-735-DOCS (3627). More information is available at www.unthealth.org.

Aging is not an illness.

Keys for maintaining health as you get older:

Exercise regularly. It improves your balance, boosts strength and fitness, and may lighten your mood. Include the elements of endurance and flexibility. The National Institutes of Health has a guide to exercise for older adults called Go4Life. It's free at 1-800-222-2225, go4life.nia.nih.gov

Eat healthy. Eat a variety of good-for-you foods daily, and practice portion control.

Be cautious about anti-aging therapies.

Thoroughly investigate supplements, restrictive diets and expensive remedies before you spend money or subject yourself to an unproven regimen.

Stay connected. Maintain close friendships through which you can share your thoughts about the challenges you face.

Keep your mind active. Learn something new, add to your vocabulary, work puzzles – whatever interests you and challenges you will also help your brain stay younger. And remember, what's good for your heart is also good for your brain!

Pay attention to your emotional well-being.

A strong sense of purpose helps you face difficult challenges. Identify areas of interest and take an active role.

Allow yourself to grieve the losses that occur across life. Grief is a normal and healthy process that speeds adjustment to the changes that loss brings. Sharing your feelings can be a positive way to process emotion.

A guide to seniors' health is available on the NIH website: health.nih.gov/topic/SeniorsHealthGeneral/SeniorsHealth

Research

Tenaciously pursuing the causes of Alzheimer's disease

Finding and treating the causes of Alzheimer's and other dementias is an intensely passionate pursuit at UNTHSC.

"If we don't solve Alzheimer's disease in the next couple of decades, it will undo our health care system," said James Simpkins, PhD, professor of Pharmacology and Neuroscience and executive director of the campus' Institute for Aging and Alzheimer's Disease Research (IAADR). "The solution will come through research. At the Health Science Center we're finding out about lifestyles, drugs and genetics to fight this scourge."

The UNTHSC scientists pursuing causes, prevention and potential cures for Alzheimer's are among the most highly regarded in the world, and among the best-funded in the nation in terms of grants per faculty member. The Graduate School of Biomedical Sciences' Department of Pharmacology and Neurosciences is unique in the U.S. for its amount of National Institutes of Health and other faculty funding, with three NIH Program Project grants.

"We are making some headway – the No. 1 factor seems to be a certain gene, ApoE-4, that has to do with plaque formation in the brain," Simpkins said. "But many questions remain, and there is a lot of work to be done."

The IAADR is a global leader in aging and Alzheimer's research. The institute's primary focus is the study of hormones in the mechanisms of brain protection and aging.

It is deeply involved in basic, clinical and translational research. "We start with cellular biology, then test in animals, then perform clinical trials with people, to show it benefits patients and society," says Sid O'Bryant, PhD, associate professor of Internal Medicine.

IAADR projects include investigations into:

- the role of estrogens and progestins in brain function and protection during aging

- the role of antioxidants, ethnicity, hot flashes, strokes and diet in cognitive decline
- how brain oxidation relates to cognitive decline, coordination and motor skills in normal brain aging, as well as in Alzheimer's and Parkinson's diseases
- behavior of nerve cells affected by Alzheimer's and other age-related issues
- learning ability and psychomotor skills to uncover how the brain ages
- clinical trials of new Alzheimer's medications

Partnering for a healthier future

UNTHSC is one of five partners in the Texas Alzheimer's Research and Care Consortium (TARCC), which also includes the Baylor College of Medicine, Texas Tech University Health Science Center, UT Health Science Center at San Antonio and UT Southwestern Medical Center. TARCC is working to improve early diagnosis, treatment and prevention.

TARCC's research is focused on early detection of Alzheimer's, estrogen's role in Alzheimer's and Parkinson's, stroke therapy and identification of oxidation processes to measure brain aging. Within UNTHSC, the consortium's membership comprises some two dozen researchers.

TARCC investigators have developed new ways to measure how well a person's brain functions, diagnosing various dementias, and determining how far a dementia has progressed. The data and biological samples gathered by the consortium are a key resource for several research projects in Fort Worth and across the state.

Last year, TARCC researchers, led by O'Bryant, announced progress on a blood test for Alzheimer's disease that is highly accurate for diagnosis. (Currently, the only way to accurately diagnose Alzheimer's is with a brain autopsy.) The blood

test, which measures concentrations of key blood proteins, is not available to the public yet but is being studied to perfect it.

To continue this work, O'Bryant and his research team at UNTHSC received a National Institutes of Health grant exceeding \$600,000 for the next two years. This project – a collaboration with TARCC, UT Southwestern, and researchers in Germany and Australia – will be the first to compare blood from patients suspected of having Alzheimer's to autopsy findings. The potential is great that one day a highly accurate blood test will give an easy and inexpensive way to determine who has Alzheimer's.

“I wake up every day believing we can – and we must – beat this disease.”

~James Simpkins



Working with the community

Several other IAADR studies work closely with elders in community- and clinic-based research.

The Health and Aging Brain study, limited to individuals 65 and older, works across the usual boundaries between the laboratory, clinic and community settings to understand which factors make a difference in healthy, compared to unhealthy, aging. Participation is free, and may involve blood work, a medical exam, interviews and memory testing.

While much information is available regarding health and aging in various groups of people, less is known about Latino aging. The Healthy Aging and Brain in Latino Elders (HABLE) study, part of the larger Health and Aging Brain project, places an emphasis on aging among Latinos in Texas. The goal is to better understand the biological and lifestyle factors that influence memory and thinking as we age. By studying aging in the Mexican-American culture, it is hoped that better interventions and treatment programs can be created. (Those who would like to participate may call Hilda Benavides at 817-735-2968.)



Sid O'Bryant, PhD, who has developed a blood test for Alzheimer's diagnosis, presents information to the community.

Leigh Johnson, PhD, assistant professor of Internal Medicine, has received a \$17,500 grant from the Hogg Foundation for Mental Health to study the influence of depression on diabetes in Hispanics. An understanding of how depression and depressive symptoms affect the control of diabetes will provide information to improve treatment and prevention.

Estrogen and brain aging

Leading experts met in June to discuss the latest findings on estrogen and brain aging at a conference organized by UNTHSC. "Window of Therapeutic Opportunity for Estrogens and Progestins on Brain Aging and Alzheimer's Disease" provided an authoritative update on new science and a new analysis of the Women's Health Initiative (WHI) memory study performed by the National Institutes of Health. This study was stopped in 2002 after investigators found that the risks of combination hormone therapy (HRT) outweighed the benefits. UNTHSC scientists believe that HRT, in the right dosage at the right time, may help prevent dementia.

"The goal of the conference was to promote an understanding of how these hormones

affect the brain," said conference co-organizer Mehravan Singh, PhD, chairman and professor in Pharmacology and Neuroscience. "Once we understand that, we can move to therapeutic options."

The conference reflects UNTHSC's efforts to help an aging female population maintain brain health. The Census Bureau estimates that by 2020, 41 million U.S. women will be between the ages of 45 and 64.

Although the WHI study was halted, some participants were helped by HRT, Singh said. "We need to find ways to measure who is most likely to benefit from HRT."

Studies show that estrogen benefits the heart and brain health, said conference co-organizer James Simpkins.

Community

Healthy Aging Council matches resources with needs

Elinor Zind had come looking for answers, or at least for hope. Her husband had been an Alzheimer's victim, and she wanted reassurance that her children were not at risk.

So she asked Sid O'Bryant, a UNT Health Science Center researcher who specializes in Alzheimer's, whether the age of a person's father at conception might be a contributing factor. When Zind's husband was born, his father was nearly 80.

The event that put her in the same room with O'Bryant and two other geriatrics experts was a Healthy Aging Forum, organized by the UNTHSC Healthy Aging Council. Zind was among more than 100 people who attended the forum in

May at Trinity Terrace, a Fort Worth retirement community.

In addition to O'Bryant (PhD, associate professor of Internal Medicine), presenters at the forum were James Simpkins, PhD, professor of Pharmacology and Neuroscience and director of the Institute for Aging and Alzheimer's Disease Research; and David Farmer, PhD, MA, assistant professor of Internal Medicine and director of the Reynolds Geriatric Education and Training in Texas (GET-IT).

Although Zind learned nothing definitive – O'Bryant told her not enough is known about the effects of parental age – she said that hearing



Healthy Aging Council member Dick Terrell helped organize a recent forum led by UNTHSC experts at a local retirement community.

about the Health Science Center's research was encouraging.

The Healthy Aging Council was created a few years ago when a group of volunteers agreed to serve as a liaison of civic leaders seeking to match aging-related community needs and resources with the needs and resources of the Health Science Center. Michele Reynolds serves as chair.

The council comprises community leaders interested in the Health Science Center's emphases on education, research and patient care to improve geriatrics and training; finding a cure for or prevention of the devastating impacts of Alzheimer's and other forms of dementia; and ensuring a high quality of life for seniors through direct care.

The Healthy Aging Council helps educate the public about UNTHSC's progress toward these goals, and it functions as a vehicle for getting involved, providing input and taking positive action in the area of healthy aging.

Council members have a passion for their community and for the unique ways UNTHSC can meet its needs.

Michael Dallas, a wealth manager who specializes in retirement planning, has worked with retirees and soon-to-be retirees for 22 years. He sees how important health is to quality of life.

"These folks are my friends, and they have two big questions: Is my money going to last? How will I maintain my health?" said Dallas, a fifth-generation Fort Worthian. "I consider it my responsibility to connect them with resources, not just financial, but all the resources that improve quality of life."

Dallas says he is committed to making Fort Worth a world-class medical-destination city. "Historically, military-related employers like Lockheed and Carswell have been our engines of growth. But with entitlements growing, the military budget will have to shrink, and the next growth industry will be life science."

The council, he said, can match what UNTHSC needs – for example, endowed department chairs – with resources in the community.

Council members Dick and Doris Terrell said they have always been intrigued by medical science, and "now that we have achieved senior citizen status, we see the council as a meaningful way of getting



"Mental exercise won't prevent Alzheimer's, but it improves your mental acuity," David Farmer, PhD, tells seniors at the Healthy Aging Council Forum conducted at Trinity Terrace.

medical knowledge to others in our community," Dick Terrell said.

After careers in the U.S. Army and finance, both are retired. They see the community's most important issues as memory loss among seniors, symptoms of Alzheimer's disease and related dementia issues.

"As the population ages, these needs will increasingly impact the loved ones who provide care," he said.

Said Doris Terrell, "We've gotten to know the researchers at the Health Science Center and the very promising things they are doing."

Through the Healthy Aging Council, she said, "We can help articulate how this work will benefit so many people with better health."

Two top priorities for the council are to fund the Seniors Assisting in Geriatric Education (SAGE) program (see page 8) beyond the end of 2012 and to fund seeds grants for young researchers investigating Alzheimer's and other detriments to healthy aging.



Patient safety is Job One with hands-on practice in Simulation Lab

“There’s no pulse!”

The patient, Norm, is flat-lining. The small woman at his side, a medical student, starts CPR. After several chest compressions, Norm’s blood pressure remains unchanged. “I’m not tall enough to get pressure on his chest!” the student cries. She climbs onto the gurney, straddles the patient and resumes compressions.

Worried bystanders watch the wide-screen monitor. The compressions become more effective, and the arterial reading creeps up: 30, 32, 45, 48. Norm may be in the clear. The scene feels real, or maybe right out of a *Grey’s Anatomy* episode, but it’s not.

Norm is a manikin. He looks like a living, breathing patient, and he acts like one, too. His vital

signs and internal sounds are programmed to be just like yours or mine. He’s one of seven full-body simulators at the Health Science Center that provide hands-on practice for students.

“Patient safety. That’s what it all comes down to,” says Gerald Friedman, DO, who supervises the simulation lab and the students who learn there. “Students can see how their actions and the medications they order affect the manikin.”

Norm’s fellow “sims” are Stan (short for Standard Man), iStan, Noelle (who delivers an infant named Hal), Susie and Koko, another obstetrics “patient.” Then there are the 10 “sams” – student auscultation manikins – half-patient models the students use to experience listening to heart, lung and bowel sounds.



Gerald Friedman, DO, uses a computer-controlled manikin to demonstrate chest compressions.

“Heart, brain and lungs are so crucial; they all work together, and the manikins reflect this,” said Friedman, assistant professor of Medical Education. He holds sway on the Medical Education and Training Building fourth floor, where clinical settings are replicated. There are exam rooms, patient changing rooms and observation cubicles for instructors.

“Students use simulation in all stages of their training,” Friedman said. “In Year One Cardiology, they start listening to heart sounds.”

Twenty-first-century simulators sound much more like human beings than the scratchy 45-rpm records Friedman used when he was a medical student. “Heart sounds are hard to hear, because there are other sounds present,” he said. “It’s nice to be able to listen to sounds in children, because when they have pathology, they usually have only one. Adults have a glossary of problems.”

Students also practice clinical exams with real people who are trained “patients.” They aren’t actually ill but are acting the part.

Later in their training, students get experience with actual patients when they begin clinical rotations, working alongside physicians. “But you can’t guarantee who will walk in, or the range of conditions they will see during rotations,” Friedman said.

Friedman regularly attends international conferences on patient simulation. Throughout the field, the priority placed on patient safety never changes. “Medication errors are costly in suffering, expense and negative outcomes for the patient.”

Lately, there’s growing interest in creating learning experiences for multidisciplinary teams. Gathered around a manikin in “cardiac arrest,” students training to be physicians, physical therapists, pharmacists and physician assistants can see how the special skills of each help save a life. “We plan eventually to add nurses and respiratory therapy students from other schools to these teams for training,” Friedman said.

Norm’s just happy to help.

A brief history of simulation

- The ancient Chinese did not allow male doctors to examine women’s “private parts,” so a woman in distress would point to the affected area on an ivory model.
- In Europe during the Middle Ages, the Catholic Church forbade dissection. Only a few cadavers were available, so wax reproductions were created. Some museums in Florence, Italy, hold collections of these wax models.
- Modern simulation dates to the late 1920s and the Link flight simulator, a safe way to teach pilots to fly on instruments.
- In 1960, Resusci Anne, the original mouth-to-mouth resuscitation manikin, was born.
- When the Apollo 13 moon shot (1970) was imperiled, the NASA ground crew used simulation to solve problems.
- In 2005 the first computerized infant manikins were created.

Source: “The History of Medical Simulation,” Kathleen R. Rosen, MD, *Journal of Critical Care* (2008), 23.

News

**WHERE THE BEST
BEGINS FOR HEALTH**

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UNTHSC's new tagline debuts on billboards throughout the area

"Where the best begins for health" is the Health Science Center's new advertising slogan, reflecting themes of excellence, medicine, the life sciences and health, as well as pride in Fort Worth institutions.

It invokes "Where the West begins," the longtime slogan favored by legendary *Star-Telegram* publisher and civic booster Amon G. Carter Sr. Although Carter died in 1955, the *Star-Telegram* has retained the slogan on its front page.

"Where the best begins for health" blends Fort Worth's history and ambience with the Health Science Center's purpose: educating tomorrow's outstanding health professionals.

The tagline debuted April 16 on a billboard UNTHSC secured near Camp Bowie Boulevard and Montgomery streets and is being used in other outdoor, print and broadcast advertising.

Cistola joins UNTHSC as vice president for research



David Cistola, MD, PhD, is the Health Science Center's new vice president for research. He comes to UNTHSC from East Carolina University (Greenville, N.C.), where he served as associate dean for research and professor of Clinical Laboratory Science

in the College of Allied Health Sciences, and as

professor of Biochemistry and Molecular Biology at the Brody School of Medicine. He also served for 18 years on the faculty at the Washington University School of Medicine in St. Louis as a tenured professor.

He will oversee the UNTHSC research office in compliance issues, funding policies, identifying research opportunities and securing support.

Cistola earned a BS in biochemistry in 1978 from the State University of New York at Binghamton and MD and PhD degrees in 1985 from the Boston University School of Medicine. He was a National Institutes of Health postdoctoral fellow from the Biophysics and Cardiovascular Institutes at Boston University and a Juvenile Diabetes Foundation fellow at both the Boston University and Washington University schools of medicine.

UNT System College of Pharmacy brings leaders aboard

The System College of Pharmacy (SCP), set to welcome its first class of students in fall 2013, has appointed Tina Machu, PhD, as associate dean of academic affairs and Lawrence J. Cohen, PharmD, associate dean for clinical programs.



Machu had served as assistant dean of pre-clinical medical education at TCOM since 2008. She joined the Health Science Center in 2003 as an associate professor of Pharmacology and Neuroscience. Before that, she served for nine years as an assistant professor in the Department of Pharmacology at the Texas Tech University Health Sciences Center in Lubbock.

Her research findings on mechanisms of drug

recognition in brain receptors have been widely published. She holds a PhD in pharmacology from the University of Texas at Austin.



Cohen comes to UNTHSC from Washington State University Spokane, where he served in the College of Pharmacy as chair of the Department of Pharmacotherapy and was professor of Health Policy and Administration.

He also was assistant director for psychopharmacology research and training at the Washington Institute for Mental Illness Research and Training.

Cohen is a founding director of the professional society, the College of Psychiatric and Neurologic Pharmacists, and was a member of the United States Pharmacopeia Psychiatry Expert Committee.

He founded and chaired the American College of Clinical Pharmacy's Central Nervous System Practice and Research Network, and he was elected a member of that organization's Board of Regents and president-elect. He served as chair of the American Society of Health System Pharmacists'

Psychopharmacy Specialty Practice Group. He is a Distinguished Practitioner of the American Academies of Practice (Pharmacy Academy).

He holds a doctor of pharmacy degree from the University of Southern California Los Angeles.

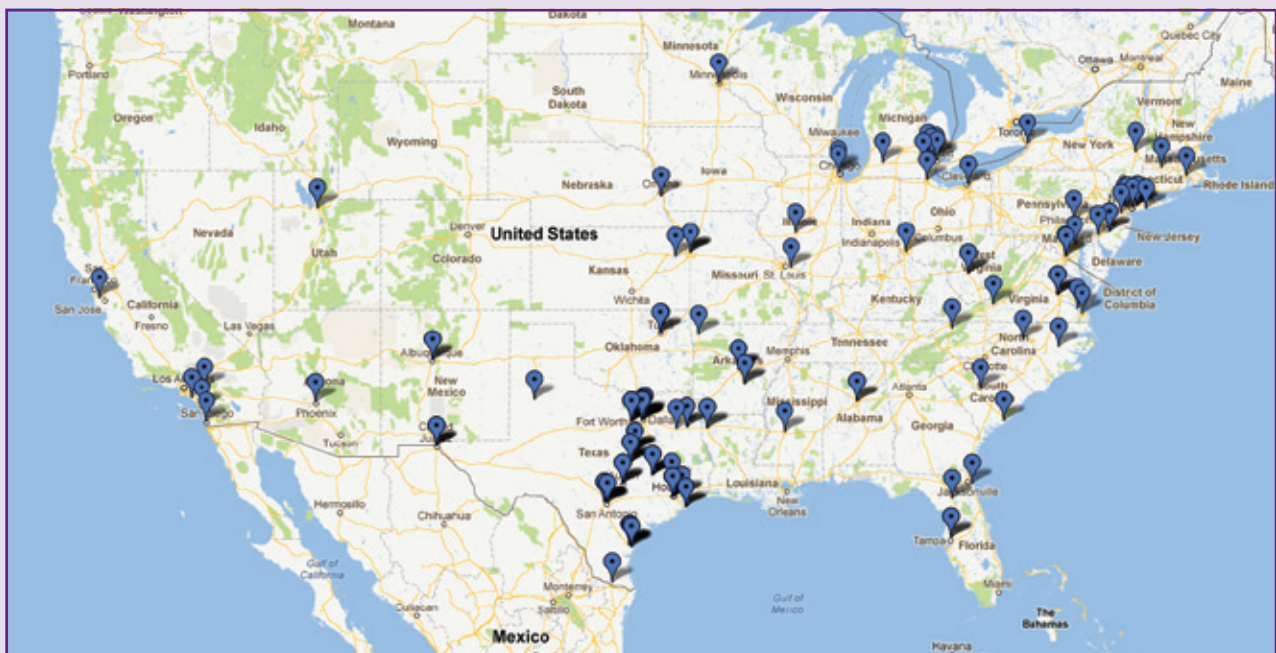
Other recent SCP appointments:

Lisa J. Killam-Worrall, PharmD, program director for experiential programs. She most recently served as assistant professor and director of the Drug Information Center, Department of Pharmacy Practice, at Texas A&M Health Science Center.

Antonia Kilpatrick, JD, MA, director of admissions, recruitment and outreach. Her previous experience includes serving as assistant director of admissions and assistant director of enrollment management at Tarrant County College.

Mason joins American Academy of Osteopathy board

David C. Mason, DO, associate professor and chair, Osteopathic Manipulative Medicine, has been elected to the American Academy of Osteopathy Board of Trustees. AAO is a national professional organization that teaches, advocates and researches the science, art and philosophy of osteopathic



2012 Texas College of Osteopathic Medicine graduates have been appointed to residencies at locations throughout the U.S., including Stanford University, Walter Reed Army Medical Center and Virginia Commonwealth University.

medicine, emphasizing the integration of osteopathic principles, practices and manipulative treatment in patient care.

Faculty members appointed to NIH advisory posts

John Licciardone, DO, MS, MBA, executive director of the Osteopathic Research Center, has been named to the advisory board of the National Institutes of Health-National Center for Complementary and Alternative Medicine (NIH-NCCAM). The board comprises a distinguished group of physicians, scientists, complementary health practitioners and members of the public, all representing a broad range of science and practice. They meet three times a year on the NIH campus in Bethesda, Md., to review grant applications and make recommendations on research priorities.

Robert Wordinger, PhD, professor of Cell Biology and Anatomy and associate director of the North Texas Eye Research Institute, has been appointed a permanent member of the newly created NIH Study Section, Disease and Pathophysiology of the Visual System (DPVS).

Foundation board member and professor emeritus Weiss retires



Stanley Weiss, DO, has retired after 30 years' service to the UNT Health Science Center.

Weiss, a World War II veteran, was most recently professor emeritus and an occupational medicine consultant. He has served on the Health Science Center

Foundation board of directors since 2004 and as a clinical education coordinator in TCOM's Department of Rural Medicine.

Weiss served as a chair of Public Health and Preventive Medicine and associate professor of Occupational and Personal Health until 1997.

From 1981 to 1997 he was medical director for the Institute for Human Fitness.

He and his wife created the Beverly and Stanley Weiss Award for Rural Health, a scholarship fund in honor of their late son, to benefit third-year TCOM students who have a commitment to rural medicine.

Weiss became a member of the UNTHSC Foundation board in 2004 and was named professor emeritus in 2008 when he joined the Office of Rural Medical Education.

In 2009 he received the Mary E. Luibel Distinguished Service Award.

Weiss served for three decades on the board of the Cowtown races, cofounded by UNTHSC. Beverly Weiss directed administrative operations for the Cowtown Marathon and 10K runs for 21 years.

Simpkins honored by American Aging Association



James Simpkins, PhD, UNTHSC professor of Pharmacology and Neuroscience and executive director of the Institute for Aging and Alzheimer's Disease Research, received the American Aging Association's Harman Research Award,

established in 1978 to honor a person who has contributed significantly to biomedical aging research. The award was presented during the association's annual meeting, held in June in Fort Worth.

2012 commencement sets record for number of students graduating

A record 492 health professionals graduated from the Health Science Center this year and were honored during commencement May 19 at Daniel-Meyer Coliseum on the Texas Christian University campus. Among the graduates, 13 received military commissions.



Harvey V. Fineberg, MD, PhD, delivered the commencement address. He is president of the Institute of Medicine and a key national medical and public health leader, having served in leadership positions in the Harvard School of Public Health.

UNTHSC inaugurates separate hooding ceremonies this year

With a record number of graduates this year, the commencement ceremony promised to go overlong if it included the traditional hooding. So hooding ceremonies were held by each of the various schools within UNTHSC, preceding commencement.

Hooding honors the relationship between the faculty mentor and the graduating student. The mentor places the hood of the regalia over the head of the graduate, signifying his or her success in



Graduate School of Biomedical Sciences hooding ceremony

completing the graduate program. The ceremony is similar to the commencement ceremony in that faculty and students are dressed in academic attire.

TCOM students observe National Osteopathic Medicine Week

Each year, National Osteopathic Medicine Week brings the osteopathic medical profession together to focus on a common goal – increasing awareness of osteopathic medicine and DOs in communities across the country. TCOM students received plaques from the Tarrant County Commissioners Court and the Fort Worth City Council honoring the mid-April observance and commending UNTHSC.



TCOM students Nicole Hocevar, Shamyal Khan, Steven Maher, Jacquelyn Brandenburg, John Smith and Christopher Vera, outside the Tarrant County Courthouse with a proclamation honoring National Osteopathic Medicine Week.

Facility Update

Imagination and collaboration bloom in new library space

The third floor of the Gibson D. Lewis Health Science Library has been transformed into a hub of activity and discussion with the creation of a new Collaboration Commons. Features include:

- The **Research Discovery Room** designed for data exploration with up to 30 faculty members working together. An 82-inch LCD display, developed by Perceptive Pixel and used by news organizations such as CNN, enables storyboarding, data visualization and multi-touch collaboration.
- A **floor-to-ceiling whiteboard** for planning and developing projects and a **liquid crystal wall** that appears clear but turns opaque with the flip of a switch, secluding the room as needed.
- Brightly colored **modular furniture** and widely available **network ports**. The furniture colors – green, orange, yellow and turquoise – were chosen to stimulate interaction and expression. Groupings are tucked into corners or stand alone.
- The **Anatomy Bar**, where students can study human body scans from the National Library of Medicine on a wall-mounted video screen or manipulate a virtual anatomy subject on a large projection table.



Young visitors explore the Library's Anatomy Bar.



Renee Drabier, PhD, vice provost, uses the 82-inch LCD Display.



The circular drive and covered drop-off area on the north side of the Everett building were demolished this spring for courtyard construction in front of the Library, scheduled for completion in 2013. The courtyard will become a commons area for the campus.

UNT Health gives birth to an empowering new approach to pregnancy care



Centering group discusses labor and pain relief



Nurse Midwife Tania Lopez

Moms-to-be are finding a new type of specialized support at two UNT Health locations in Tarrant County.

UNT Health's certified nurse midwives launched Centering Pregnancy, the first such program in Fort Worth, a little more than two years ago to give expectant mothers answers to the myriad questions that might not surface during a standard doctor visit. Centering combines checkups, prenatal education and talking with other pregnant women – all in the same convenient visit.

Centering for prenatal care has been practiced in other parts of the U.S. for more than a decade.

"A co-worker suggested I use the UNT Health midwife group, saying their philosophies for prenatal care were about empowering the mother and involving the father," explained Elizabeth Marshall, who went through UNT Health's centering program during her recent pregnancy. "We really responded to this approach after a meet-and-greet at the office and knew we were in the right place."

That place is led by several certified nurse midwives, among them Tania Lopez. "We want you to be informed and part of the decision-making

process about your care," Lopez told a group of six women and one husband at a meeting in May.

Lopez delivers the women's babies if she is on call when they begin labor. Otherwise, another nurse midwife in the practice steps in. The women meet all the nurse midwives beforehand, so the person delivering their baby won't be a stranger.

Indeed, it's the nurse midwife who provides all the prenatal care for these women. A physician is available if complications develop.

Some of the women in Lopez's centering group used more traditional care during previous pregnancies. They all agreed that centering gives them an opportunity to learn as much as they would like about every aspect of pregnancy and childbirth.

The women in Lopez's group this day are in their final trimester. Lopez has an inclusive, nonjudgmental manner, and the session covers much ground.

"Do you want to talk about epidurals?" she asks. They do.

"What have you heard about epidurals?" she says. "Let's talk pros and cons. Let's start with the cons."



Participants use a calendar calculator to check their due dates.

“It makes you not able to move around,” says one woman. “I heard it makes your baby groggy,” says another.

The discussion proceeds. Lopez listens. After everyone has contributed, she gently corrects any misconceptions. She presents additional information to help the women understand how an epidural works and under what circumstances they might consider having one, although most of the women want a drug-free delivery.

The certified nurse midwives in the program receive training through the Centering Healthcare Institute, which is headquartered on the East Coast and conducts training sessions in various cities. The UNT Health nurse midwives traveled to San Antonio for their training.

Research shows greater satisfaction and better outcomes when centering is used, said Kathleen Donaldson, a certified nurse midwife and director of advanced practice professionals for UNT Health’s OB/Gyn Department.

“Centering may well replace traditional prenatal classes,” Donaldson said. “It relies on an evidence-based redesign of health care delivery that incorporates assessment, education and support.”

In the monthly meetings (more frequent toward the end of pregnancy) the women discuss set topics and hear from experts such as dietitians and lactation consultants. The patient’s partner is welcome to attend. A centering visit usually runs 90-120 minutes, and women are grouped by expected delivery dates so participants can share common experiences.

Marshall said she and her husband visited with other types of prenatal care providers before deciding on centering. “You don’t have to be a first-time parent to benefit from the centering experience,” she said. “We had a mother on her seventh pregnancy show up to every meeting, and she would talk about learning new things from the discussions we had. During those meetings you discuss pregnancy myths, delivery options, breastfeeding experiences and everything in between. You can have the security and confidence to broach any topic and not be afraid of sounding silly.”

And the health care provider can work more efficiently. Lopez enjoys not having to “say the same thing 12 times a day.”

As the women arrived for the May session, they checked their own weight and blood pressure with a wrist cuff, and they listened to their baby’s heartbeat when Lopez applied the Doppler ultrasound. They helped themselves to a healthy snack and chatted until the group discussion began.

The husband in the meeting said he finds centering more relaxing than the traditional prenatal care his family experienced with four previous pregnancies: “There’s no waiting in a doctor’s office.”

Centering locations

- UNT Health at Alliance, 12650 N. Beach, Keller, TX 817.735.2100
- Harris Women's Office-Klabzuba Tower, 1300 W. Terrell, Fort Worth, TX 817.735.2300



twitter.com/unthealth



facebook.com/unthealth

Research Update

20th Annual Research Appreciation Day highlights outstanding work

The University of North Texas Health Science Center celebrated research accomplishments April 13 with the 20th annual Research Appreciation Day (RAD).

At UNTHSC, internationally known faculty researchers are exploring fresh approaches to key areas, including aging and Alzheimer's disease, primary care and prevention, and applied genetics. RAD provides an opportunity for students, faculty and staff across the campus to share their research with colleagues and the public.

Research Appreciation Day spans medicine, public health and basic science. It encourages the development of joint research projects and increases awareness of the quality and range of research conducted at UNT Health Science Center.

Poster and oral presentation competitions for students, postdoctoral fellows and residents were featured this year. Some of the posters:

Aging/Alzheimer's

- Effect of the type of cane on gait and rehabilitation

Cancer

- Human papilloma virus (HPV) correlation to throat cancer
- Detecting bladder cancer utilizing fluorescent technologies

Cardiovascular

- Public knowledge of how to use automated external defibrillators (AEDs)
- Improving heart surgery through the creation and testing of a split-tube chest drain

Cellular and Molecular

- Using community health workers to deliver diabetes self-management skills



2012 RAD award winners and administrators gathered at the Medical Education and Training Building.

Physical Medicine/OMM

- Using the Nintendo Wii gaming system as a therapeutic tool for children with developmental delays

General Public Health

- The links between tobacco, alcohol consumption and genotype for bar patrons
- Prescription drug abuse among youth
- How adolescent scoliosis relates to other health conditions

Keynote speaker was Elizabeth J. Protas, PT, PhD, chair of the Department of Physical Therapy in the School of Health Professions at the University of Texas Medical Branch at Galveston. She is a specialist in geriatrics and rehabilitation of adults with stroke, Parkinson's disease and spinal cord injury.

The community is invited to RAD 2013, set for Friday, April 12, 2013.

International conference spotlights osteopathic research

The Osteopathic Research Center's (ORC) international meeting this April in Fort Worth featured a range of topics, including:

- Development of sensors in football helmets to measure the force of hits and perhaps lead to improved helmet safety and fewer injuries
- Determining if manual therapies such as osteopathic manipulation, chiropractic manipulation and massage therapy disrupt the pain-spasm-pain cycle, and examining how these treatments work
- Using robots to assess muscle activation and retrain muscles
- Using manipulation to treat ear infections and sports injuries in children

The interprofessional conference focused on musculoskeletal health with the theme "High Tech, High Touch."

Participants saw presentations on low-back pain: the impact of psychosocial factors, research to develop guidelines for appropriate treatment, and the cost effectiveness of various treatment approaches. Other speakers presented research on the treatment of hand injuries, shoulder pain and fibromyalgia.

In all, 20 physicians (DO and MD), chiropractors, physical therapists and basic scientists from the United States, Canada, England and Germany presented at the conference.

Renowned pain researcher Dennis Turk, PhD, from the University of Washington in Seattle received the inaugural Murray Goldstein, DO, Award.

Results were presented from the OSTEOPATHic Trial, a clinical trial of 455 patients conducted at the UNT Health Science Center by John Licciardone, DO, MS, MBA, ORC's executive director, to determine the effectiveness of osteopathic manipulation and ultrasound therapy to treat chronic low-back pain. The five-year study is the largest so far on osteopathic manipulation for low-back pain. It was funded in part by a Midcareer Investigator Grant from the National Institutes of Health-National Center for Complementary and

Alternative Medicine, and in part by a grant to ORC from the Osteopathic Heritage Foundation.

Event sponsors included the ORC through a grant from the Osteopathic Heritage Foundation, the UNT Health Science Center and the Texas College of Osteopathic Medicine.

\$7.3 million award will improve, track assisted living care

The UNT Health Science Center and Brookdale Senior Living, the largest senior living community operator in the country, recently received a \$7.3 million Health Care Innovation award from the U.S. Department of Health and Human Services for a program designed to reduce hospital re-admissions of residents in assisted-living situations.

The Brookdale Senior Living Transitions of Care Program, a partnership of the UNT Health Science Center, Brookdale Senior Living and Florida Atlantic University, will begin in Brookdale's Texas and Florida facilities, gradually expanding to 35 states.

Clinical nurse leaders in the program will act as program managers, training care transition nurses and other staff on interventions to reduce acute care transfers, and on health information technology resources to help them identify, assess and manage residents' clinical conditions.

The UNT Health Science Center will train an estimated 10,926 workers over three years and create an estimated 97 jobs for clinical nurse leaders and other health care providers.

The program hopes to slow the progress of disease, reduce complications, improve care and reduce avoidable hospital admissions for older adults. The program could reduce hospital readmissions by 11.2 percent and save Medicare \$9.3 million.

Only 3 percent of the 3,000 requests submitted received awards, made possible by the Affordable Care Act to support innovative projects designed to deliver high-quality medical care, enhance the health care workforce and save money.

In the Community



UNTHSC concert goers joined singer Tim Halperin (center, wearing green cap) onstage.

UNTHSC supports Frogs for the Cure with pledges, concert

American Idol semifinalist Tim Halperin performed a noon concert on campus May 1 as part of his campaign in support of TCU Frogs for the Cure and the Greater Fort Worth Susan G. Komen affiliate. He issued a challenge to men all across the Metroplex to sign a card promising to encourage the women they love to be screened for breast cancer. More than 100 UNTHSC men signed these cards.

UNTHSC President Scott Ransom presented the pledge cards in a ceremony between innings at the May 5 TCU Frogs for the Cure baseball game. UNTHSC was a game sponsor and provided free pink bandanas to all who attended.



American Idol semifinalist Tim Halperin.



Two from UNTHSC honored among Fort Worth's '40 Under 40'

Two UNTHSC employees are among the leaders recognized by the *Fort Worth Business Press* as the city's "40 Under 40" for 2012.



Blair Chappell

Blair Chappell, physician recruiter for UNT Health, was noted for her involvement with the Junior League and the Cowtown races, among other achievements. With her ability to determine appropriate fits in both the health care and business communities, Chappell's insight and professional judgment make her a valuable asset to the Fort Worth community, the paper said. Chappell is a Fort Worth native and graduate of Arlington Heights High School and UT Austin.



Sid O'Bryant, PhD

Sid O'Bryant, PhD, associate professor of Internal Medicine, was noted for accomplishments with the Texas Alzheimer's Research & Care

Consortium, a collaborative group of scientists who are working to bring innovative treatments to those who suffer from Alzheimer's and age-related diseases. O'Bryant builds bridges across institutions as he seeks to bring advances in Alzheimer's research and treatment from the lab to those in need, the paper wrote. (See page 12 for more on O'Bryant's work.)

High School Art Competition brings vibrant works to campus

The Atrium Gallery came alive with teen artists' creativity in April when the annual High School Art Competition brought the work of talented 11th- and 12th-graders to campus.



Painting by Elena Chudoba, Mansfield Legacy High School, who was among winners in the UNTHSC high school art contest.

Since 1985, the competition has provided an opportunity for young people to exhibit in mixed media, printmaking, photography, drawing, three-dimensional art, painting and computer design.

The juried competition draws hundreds of entries; schools in 10 counties are invited to participate. This year, 200 pieces of art were exhibited. Winners received ribbons and art supplies.

The Atrium Gallery, on the Everett Building first floor, is an active public exhibition space and hosts eight to 10 shows a year featuring a diverse range of art.

North Texas Health Forum explores alcohol abuse solutions

The Fifth Annual North Texas Health Forum brought a nationally acclaimed alcohol-abuse researcher to campus in April.

Alexander Wagenaar, PhD, professor of Health Outcomes and Policy and a member of the graduate faculty of Epidemiology at the University of Florida College of Medicine, delivered the keynote speech, "Killin' Time: Alcohol and Injury," on options for alcohol control policies.

As a new PhD decades ago, Wagenaar's first study of the effects of raising the drinking age to 21 put him in the limelight, with stories in *The New York Times*, on network news and elsewhere. Mothers Against Drunk Driving (MADD) used his scientific results to persuade President Reagan to support raising the drinking age to 21.

Co-sponsors of the forum, "Addressing

Community Alcohol Abuse Problems through a Public Health Lens,” were the School of Public Health (SPH) and Tarrant County Challenge, an agency dedicated to fighting substance abuse.

Alcohol abuse is a significant issue in communities nationwide. The forum included sessions with experts in alcohol-related policy and research. The focus was on the multifaceted relationship between alcohol and injury as viewed from three perspectives: clinical, research and policy development.

The program opened with a look at MADD’S national and Texas legislative initiatives with John Ansbach, chief legal officer at the national office of Mothers Against Drunk Driving.

Scott T. Walters, PhD, SPH professor of Behavioral and Community Health, presented research supporting the use of brief interventions in emergency medical departments as a strategy to address alcohol abuse.

UNTHSC celebrates 30 years' outreach to students of all ages

Rachelle Wanser is only 15, but already she has launched her medical education.

“I plan to be a neonatal surgeon,” the Benbrook 10th-grader says, and she knows why: “I want to help people, I like working with kids, and I don’t want to do the same thing every day. Surgery is always different.”

Wanser’s interest in medicine led her to the new Texas Academy of Biomedical Sciences (TABS), a



Shree Bose, 2011 Google Science Fair winner mentored by UNTHSC Professor Alakananda Basu, PhD, was keynote speaker.



Speaking at the spring event on how education outreach changed their lives were Preston Burnley, a McNair Scholar; TABS student Rachelle Wanser; and Eric Gonzales, PhD, assistant professor, Pharmacology & Neuroscience.

UNT Health Science Center partnership with the Fort Worth Independent School District (FWISD), University of North Texas and Tarrant County College-Trinity River.

At TABS, middle and high school students begin preparing for careers such as physicians, emergency medical technicians, forensic scientists, biomedical engineers, biotechnicians and pharmacists. And they can earn up to two years’ college credit. “It sounded like an opportunity to get a head start on my future,” Wanser said.

After her first year, she’s glad she signed up: “This is better preparation than I would have gotten anywhere else.” She was one of the featured speakers at a springtime reception on the UNTHSC campus celebrating three decades of educational outreach.

TABS is one example of that outreach, which also includes more than a dozen other programs.

TABS teaches math, science and technology in an environment that often resembles university pre-med classes. Wanser’s coursework included principles of health science and medical terminology. Plus, she said, “We have a different guest lecturer every Friday who tells us how they got to that career. We understand how we can become what they are.”

TABS Principal Troy Langston concurred. “Our students have an aptitude for math and science, and some know they want to become doctors or optometrists or go into forensic science.”



Robert Kaman, JD, PhD, with Thomas Yorio, PhD, was honored for his 30 years of outreach leadership.

“The connection to the Health Science Center is important,” Langston said. “Our students are inspired by its speakers on public health issues and other facets of medical science.”

As Wanser said, “Medical school is a long journey, and TABS gives you a great start.”

UNTHSC has received recognition for its outreach programs designed to increase diversity within the scientific community and further careers in the life sciences, including:

- National Institutes of Health – Minority Access Role Model Institution
- National Association of Graduate Admissions Professionals – Award for Excellence in Minority Recruitment
- National Science Foundation – President's Award for Excellence in Science, Mathematics and Engineering

TABS is unique in Texas because it focuses on the biomedical sciences and health professions. The collaboration with FWISD took three years of planning, said Robert Kaman, JD, PhD, adjunct professor, Biomedical Sciences and Health Management and Policy and associate dean for outreach until retiring in 2011. “The support of Melody Johnson, FWISD superintendent at the time, and UNTHSC President Scott Ransom and Community Relations Executive Director Randy McGuffee were essential,” Kaman said. “TABS will become a model early-college/high school program

for students starting their path toward a medical or research career.”

TABS recently earned provisional designation as an Early College High School (ECHS).

The Texas Education Agency grants ECHS status to innovative high schools on or close to college campuses that allow students who are least likely to attend college to earn a high school diploma, plus 60 hours of dual college credit.

In addition to TABS, UNTHSC academic outreach programs include:

Primary and Secondary

Mini-Medical School – For fifth-graders, who spend a day on campus to get an overview of medical school.

Reach Out and Read – Promotes literacy among UNT Health’s young patients and their parents.

North Side High School Math and Science Tutoring Program – UNTHSC students serve as tutors.

Adopt-a-School with FWISD – UNTHSC student organizations, faculty and staff offer a variety of programming, tutoring, preceptorships, mentoring and advising to support science education and leadership development and to help improve attendance, academic achievement and completion rates.

GO Center Project with FWISD – Helps students see pathways to careers and college.

FWISD Guidance and Counseling Volunteer Mentorship Program – Assists students with college/ career preparation.

Richard Milburn Academy Tutorial Partnership – UNTHSC students tutor in math and science classes at the Richard Milburn Academy, a public charter high school designed to help students after a setback.

Secondary/Undergraduate

North Texas Research Symposium – Annual event where local high school students and college undergraduates from across the state present their research in poster sessions, competing for awards.

Undergraduate

Joint Admission Medical Program (JAMP) – Encourages highly qualified, economically

disadvantaged Texas residents to pursue medical education, bringing college sophomores to campus for five weeks each summer. Features preparation for the Medical College Admission Test, graduate-level physiology and medical ethics courses, clinical preceptorships and mentoring by TCOM students, community service projects and career workshops.

Summer Multicultural Advanced Research Training Program (SMART) – Summer program to familiarize college undergraduates with biomedical research.

Post-Baccalaureate and Graduate

Post-Baccalaureate Research Education Program and Retention Enhancement (PREPARE) – Designed for underrepresented minorities who have earned undergraduate degrees in science, this program prepares students for acceptance into doctoral programs and success earning their PhDs.

Ronald E. McNair Post-Baccalaureate Achievement Program – Helps prepare low-income students, first-generation college students and students from groups underrepresented in graduate education for doctoral study.

Minority Opportunities in Research and Education (MORE) – Designed to ease the transition from undergraduate to graduate studies through academic and financial support.

Faculty Development Programs

Steps Toward Academic Research (STAR) Fellowship – Since 2006, the UNTHSC Texas Center for Health Disparities has promoted research, education and training with the goal that students, faculty and the community participate in understanding and eliminating health disparities. The objective of developing a strong, minority-based cadre of research faculty from underrepresented minority partner institutions led to the formation of the STAR program. Of the 30 STAR fellows in the first three groups, 19 report submitting 46 papers to peer-reviewed journals (41 published). Seventeen grant applications submitted by former STAR fellows have been funded for a total of \$1,874,046.

Students take medical services to the homeless

Texas College of Osteopathic Medicine students provided free medical services to the homeless April 19 at Project Homeless Connect, an annual event that gathers helpful services at one Fort Worth location.

The TCOM students performed screenings, including blood glucose and blood pressure. They also provided osteopathic manipulative treatment.

The April 20 *Fort Worth Star-Telegram* featured the students in an article and photos.



TCOM students provide health assessments at Fort Worth's annual Project Homeless Connect event.

Advancement

Jay and Mimi Bonds give TCOM students the gift of insight on treating addiction

The words vary, but the picture they paint of addiction is universally one of despair, damaged lives and even death. You've heard many of them: Demoralization. Anger. Insidiousness. Trauma. Shame. Guilt.

The most important may be the word you hear least often.

Disease.

Fourteen Texas College of Osteopathic Medicine students – all gifted aspiring physicians with an intellectual understanding of addiction – gained a more intimate perspective while observing treatment and counseling at the Betty Ford Center's Summer Institute for Medical Students in Rancho Mirage, Calif., this May. They spent a week with patients and their families in an attempt to understand the raw emotion behind those words.

They report that this one week will alter the way they will practice medicine, and that it transformed them personally. Two words, they all agree, describe the experience.

Life changing.

Jay and Mimi Bonds of Fort Worth are responsible for these defining moments. They've seen the heartbreak that addiction inflicts on patients, families and society.

"Growing up in an addicted family affects children their whole lives," Mimi Bonds said. "An incomprehensible state of demoralization develops, and the entire family is stressed."

Added Jay: "Addiction is not a choice – it's a disease. It affects everyone you know if you are addicted. Everyone you come in contact with will

be impacted, especially children.

Doctors say they can tell an addicted family by the size of their medical file. And there's an economic toll – lower productivity, missed days and poor workmanship."

So the couple stepped up. Eight years ago when

Michael Oglesby, PhD, professor of Pharmacology and Neuroscience, needed a sponsor for a TCOM student to attend the institute, they quickly agreed.

"That student came back and spoke to the class," Jay recalled. "We sent two the next year. There was a buzz on campus, and the program kept growing. These men and women will be caring for people for 30 or 35 years. During that time there's no telling how many people they can help."

This year two faculty also attended: David Atkinson, MD, assistant professor, Psychiatry and Behavioral Health, and Judy Newgren, MS, instructor, Internal Medicine.

Jay and Mimi Bonds now underwrite the effort each year, with additional funding from various sources, including the Mr. and Mrs. Clifton H. Morris Jr. Foundation; the Thomas M., Helen McKee & John P. Ryan Foundation; and the Crystelle Waggoner Charitable Trust, Bank of America, trustee.

Addiction resources

Recovery Resource Council (*referrals*)

817-332-6329

877-332-6329

www.recoverycouncil.org

Alcoholics Anonymous

817-332-3533

800-396-1602

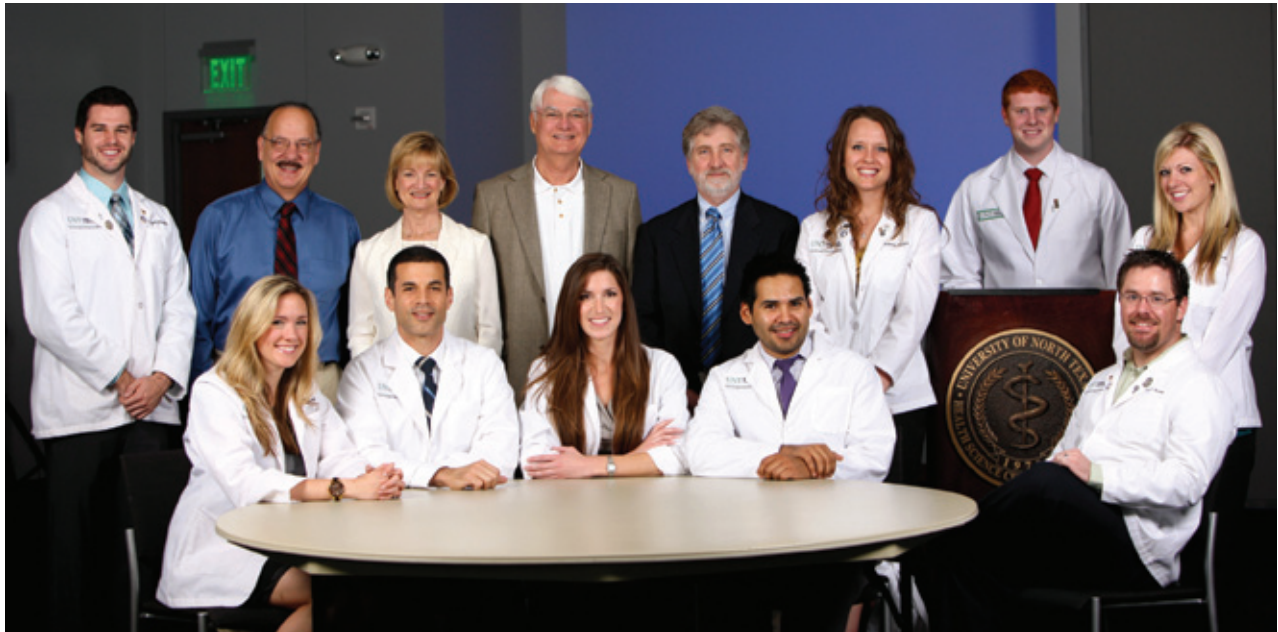
www.fortworthaa.org

Fort Worth Narcotics Anonymous

817-335-6360

www.fwana.org





Participants, faculty leaders meet with Jay and Mimi Bonds, whose gift allowed 14 students to attend the Betty Ford Center's Summer Institute for Medical Students. Seated are TCOM students Jacquelyn Brandenburg, Nassar Ayyad, Jacquelyn Paetzold, Jose Cruz and Brady Bowen. Standing are TCOM student Christopher Dingess; Michael Oglesby, PhD, professor; Mimi Bonds; Jay Bonds; Alan Podawiltz, DO, chairman, Psychiatry and Behavioral Health; and TCOM students Christine Rollins, Collin Swafford and Brenna Pickard.

Oglesby still champions the program, along with Alan Podawiltz, DO, chairman, Psychiatry and Behavioral Health.

What was that campus buzz all about? Here's how the students described it during a roundtable with Jay and Mimi after they returned from the institute in May.

"We saw these patients pour out their souls at the Betty Ford Center, and it changed us as people."

"This challenged my perception and judgment, and the Betty Ford Center invited us all to reflect on

the nature of this chronic disease. Addiction doesn't respect social/economic boundaries."

"The program underscores the vulnerability of human beings. We learned to think of addiction in terms of a disease, not in terms of what the individuals are doing to themselves. We learned to be less judgmental."

"I had always heard 'always be genuine,' and I always considered myself to be genuine. But this week taught me what it really means to be yourself and admit your faults. I didn't realize I thought I was better than someone else. I realized I can grow if I just remove that shell."

"I was thinking while I was there 'I'm in therapy, too.'"

Many of the students were drawn to the program because there's addiction in their own families. But personal experience doesn't automatically lend insight into how to treat the disease.

One student's sister had been assisting a loved one struggling with addiction, to no avail.

"I was able to tell my sister to try an approach I saw at Betty Ford," he said. "She said, 'Oh, my God – that really worked. I've been trying so long to help, and I didn't know how.' Now she's seeing benefits.

"We may have seen addiction but were ignorant



Mimi Bonds



Jay Bonds

of what this disease is doing to lives until we spent a week with them [Betty Ford patients]. We saw what we have to change to defeat this disease. We have to do more than hand patients a prescription as they leave the office.”

They say the experience will change how they practice medicine.

“Our first duty as physicians is to do no harm. If we don’t address the underlying conditions to addiction, we are doing harm.”

The students said they will ask patients if they drink or use drugs as they gather their history. They will know the importance that family plays in recovery. They will not necessarily “write for the full 30” tablets when prescribing painkillers. They will have researched local resources for treating addiction so they can make quick referrals. As one student said, “It will make me a better physician.”

Most of all, the students say they thank Jay and Mimi Bonds for the life-changing opportunity.

“We will carry on these experiences as we treat patients. We are 14 little seeds – we will pay forward your gift over and over.”

“Your generosity touched all of us, and it encouraged us to see someone who cares that much. It makes me want to be a better person.”

“You will be part of my practice.”

(See excerpts from a student's thank-you letter on next page.)

Addiction: A chronic, treatable disease that changes the brain

Addiction affects 23.2 million Americans. They lose the ability to control their need for alcohol or other drugs. This lack of control is a result of alcohol- or drug-induced changes to the brain itself, which then causes behavior changes.

This change happens in the dopamine pathway, a neurotransmitter produced by nerve cells that processes and transmits information. This area of the brain is not under conscious control.

When deprived of the substance abused, the brain sends a deprivation signal similar to that of starvation.

Long viewed as a lack of willpower or a moral failing, addiction is now considered by the medical community to be a disorder much like other chronic illnesses that involve behavior and lifestyle. Some of these illnesses begin with voluntary behaviors – poor nutrition, reluctance to exercise – then biological changes occur to make the illness a chronic condition.

Most people who have chronic conditions, even those who are working hard to stay on top of them, sometimes eat poorly or do other things they know aren't healthy, and they relapse.

Diseases like this include:

- hypertension (high blood pressure)
- adult onset (type 2) diabetes
- atherosclerosis (hardening of the arteries)

These diseases are similar because they are chronic, influenced by biological and behavioral factors, and incurable, although they can be treated and managed.

Source: The Addiction website, produced by HBO in partnership with the Robert Wood Johnson Foundation, the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism, <http://www.hbo.com/addiction/>

Excerpts from a student's letter to Jay and Mimi Bonds after attending the Betty Ford Center's Summer Institute for Medical Students:

I now feel more competent and confident with my ability to approach individuals' social behaviors, underlying emotions and identify addictions and traumatic events outside the individual's own coping abilities. As a physician, our number-one responsibility is to do no harm. When we fail to identify and address social behaviors, traumatic events and addictions, we are actually doing harm by doing nothing. We all need not be experts in addiction medicine, but being acquainted with, aware of and willing to address the disease of addiction is an essential component of comprehensive patient care.

The Betty Ford Center has helped me realize that no one is perfect. We all need help at times in our life. No one is immune from trials and no one is immune to addiction. As do the chronic diseases of diabetes or hypertension need continual monitoring and management, the disease of addiction also needs vigilant monitoring and management. Unfortunately a cure is not likely, but this disease is treatable by approaching the individual as a bio-psycho-social-spiritual unit. Addressing addiction with love instead of shame fosters openness and true recovery. Hopefully as a society we can offer hope and a willing arm or support. Perhaps, one day, that hope and support will be reciprocated.

TCOM Reunion

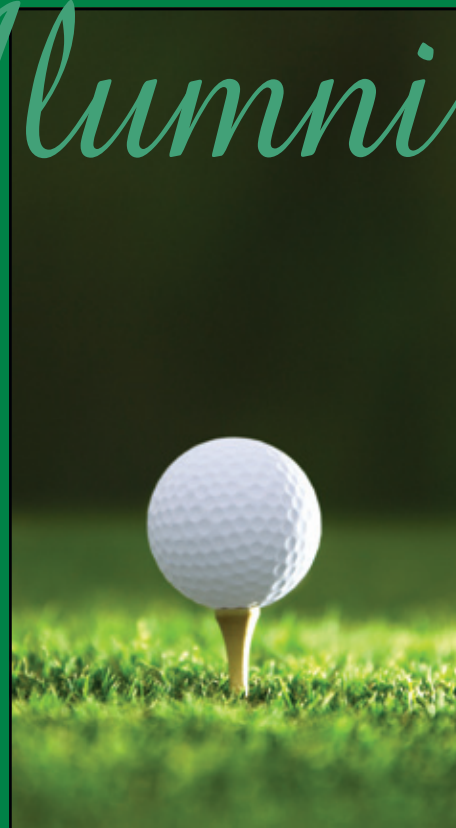
adds golf tournament for scholarships

This year's Texas College of Osteopathic Medicine (TCOM) reunion will have a new feature: a golf tournament benefiting TCOM scholarships.

Tee time is set for 8 a.m. Saturday, Sept. 8, at Rockwood Golf Course, just three miles from UNTHSC. Prices are \$50 for students and medical residents; \$75 for professionals and the public. Sponsorships are available as well.

This year's reunion honors the classes of 1977, 1982, 1987, 1992, 1997, 2002 and 2007. Reunion weekend begins with a reception on the evening of Friday, Sept. 7 and continues through Saturday with a full slate of activities including Fall Gallery Night, the annual open-house event when dozens of art galleries and retailers welcome the public with special exhibits.

For more information, contact Denise Armstrong, denise.armstrong@unthsc.edu, 817-735-2278 or 1-800-687-7580.



Golf tournament raises ‘green’ for scholars



It was a sellout! More than 140 players — the most ever — participated in the seventh annual President’s Invitational Tournament on April 17 at Ridgley Country Club Championship Course.

The tournament raised more than \$75,000 for the Health Science Center Foundation in support of scholarships and programs to benefit the institution. Thanks to presenting sponsor Quest Diagnostics and co-chairs Michele and Fred Reynolds.



UNTHSC’s President Scott Ransom, DO, MBA, MPH, presents Quest Diagnostics’ Matt Hamlin with an event shadowbox honoring Quest for four years as presenting sponsor.



Golfers enjoyed perfect spring weather, showed off their putting skills and celebrated after the tournament.

Alumni

It's all about community for this alumnus on a mission.

Make that several missions.

A. Ray Lewis, DO, takes an urgent call from Hurst Plaza nursing home. A new patient has been admitted suffering advanced dementia. The patient's sister is adamant: No drastic measures like a feeding tube, only comfort care and IV fluids.

But now the patient has pulled out the IV and doesn't want it re-inserted. The nursing staff needs a decision.

Urgency is no stranger to Lewis (TCOM '86). He's medical director or attending physician for two hospices, some 15 nursing homes and two home-health agencies, most in seriously underserved areas. Many of his patients arrive directly from state psychiatric hospitals and prisons.

Lewis' dedication to the underserved, and to the Fort Worth community where he grew up, is unmistakable. First, there are the outward signs. His office on East Lancaster Avenue is exceptionally modest, occupying a nondescript building in the legendary neighborhood named for Stop No. 6 on the Interurban railway that carried passengers

between Fort Worth and Dallas from 1902 to 1934. In modern times Stop Six is a perennial focus of urban renewal that never quite seems to take. Many buildings are vacant or need repair. The ones in use are likely to be fronted with heavy metal-mesh security grills.

What Lewis sees, though, isn't the dilapidation. He sees people, especially aging people, who need a doctor.

"It's hard to get doctors to come out here and do geriatric care in east Fort Worth," he said.

But he's not complaining on his own behalf. "I have had the opportunity to take care of my first-

grade teacher, my second-grade teacher and her father, and so many more

people who did so much for me."

Within five miles of his office are the scenes of his earliest memories: the kindergarten he attended, his elementary school, his high school (Dunbar), his undergraduate school (Texas Wesleyan) and the spot where he and nine siblings grew up in a house that's no longer standing.

"We have a personal and collective responsibility to educate the community."

~Ray Lewis



Ray Lewis, DO, (third from right) updates staff during a meeting at Immanuel's Health Care, where he is medical director.



Ray Lewis (TCOM '86) is medical director at several Fort Worth geriatrics facilities.

“It’s a blessing being here,” he said.

And he has given much back. He was part of the group that founded the John Peter Smith Health Network’s Stop Six Clinic. “I was on that board with people who had been my teachers and who still wanted to call me ‘the little Lewis boy.’ ”

Now, he says, “there are many things still left undone.” Physicians’ reluctance to practice in this community isn’t just about the money, Lewis says, although that matters.

“It’s money and also the culture. But I know I am where God wanted me to be. He outfitted me for this, here and now.”

Lewis’ dedication to medicine was forged in wartime, and that’s why he didn’t start college until he was 27. During the Vietnam era he was a medic in military evacuation hospitals in Korea and Okinawa. When he returned to Fort Worth, he worked for Dr. Marion Brooks, a legendary physician who also was black.

After finishing his medical education at the Texas College of Osteopathic Medicine, Lewis never considered practicing anywhere but in his old neighborhood. It was an underserved area that desperately needed doctors.

He had personal experience with the historic injustices that underlie health disparities. When he was born in Waxahachie, “Jim Crow was still the law and you couldn’t just walk into any hospital.” His parents were laborers and the family moved to Fort Worth when his father got a better job with Purina.

Lewis is a modest man but has received a host

of accolades. He’s a member of the TCOM Alumni Association Board of Directors, and he recently finished a term as board president of the Texas Medical Directors Association. But there’s so much more he wants to do.

“I have come to cherish nursing home workers,” he said. “The aides and the maintenance people often work two jobs and have little kids and no health insurance. I want to offer concierge ambulatory care – primary care for a flat monthly retainer, maybe \$50 -- to nursing home employees. I feel that I have the calling to do that for them.”

Lewis also recognizes that doctors need a way to spend considerable time refreshing their skills -- without giving up their practice. “It just consumes me, trying to provide good geriatric care and help other people do it, too.”

In 1996-97 he piloted a geriatric fellowship at UNTHSC with the help of Janice Knebl, DO, MBA, professor of Internal Medicine and the Dallas Southwest Osteopathic Physicians Endowed Chair in Clinical Geriatrics. She made it possible for Lewis to have a geriatrics fellowship. “Physicians need to be able to take six months to update their skills,” he said. “If they could keep their clinical practice part-time, it would merge community and school needs. We’re missing an opportunity to change the face of medicine with a fellowship like that.”

He worries about who will pick up the torch when he retires. “I’m willing to consider donating my office if we could get partners to come in here and open a clinic.”



“I make house calls
because sometimes I really
need to know how a patient
is living.”

~Marianne Beard

It's the whole patient that matters to alumna Marianne Beard

A rarity these days, house calls are integral to Marianne Beard's practice.

She makes them.

And sometimes the patients come to her home.

"I was sick for a while and one of my patients got worried," recalls the Texas College of Osteopathic Medicine alumna. "I don't know how she found out where I lived, but she brought me chicken soup and homemade bread."

Food is a sort of theme for Beard, PhD, DO (TCOM '85), who treats geriatric patients in Arlington and Grand Prairie. Not physical sustenance so much as personal attention, and that extends to every aspect of her relationship with patients. She tells them to call any time, and they do, often with nonmedical questions.

"I had a patient call recently and ask for a recipe for rice pudding. Why would I have a recipe for rice pudding? But we found a recipe online and printed it out for her."

Beard opened her family and geriatric medicine practice in 1986 and over the years has put her stamp on the art of being a physician. "To me, medicine isn't a business," she says. "It's a sacred trust."

House calls help Beard meet her goal of keeping patients out of the hospital. This philosophy led her to cancel her hospital affiliations about 12 years ago. Generally, if a patient is sick enough to be hospitalized, she calls in a specialist with the necessary connections. Otherwise, patients are more comfortable in their own homes.

Also a dozen years ago, Beard took her most unconventional step: dropping her malpractice insurance. "It was a decision to trust my patients," she says. "I ask them to trust me, so I'm going to trust them."

When other doctors learn about her way of practicing medicine, some get wistful; others just shake their heads. "I had one doctor tell me, 'Dr. Beard, you're going to miss the bus.' I told him you can't miss a bus you're not waiting for."

As clear as it is that Beard's calling is medicine,

she initially never intended to be a doctor. In her late 30s, though, she knew she needed a change. She had been in the classroom much of her work life, teaching everything from third grade to advanced physics.

But what kind of change? In the way that siblings often do, her sister had picked up a certain vibe.

"She said to me, 'If you still want to be a doctor, maybe now's the time,'" Beard says. "Until that moment I had never wanted to be a doctor. She knew something about me that I didn't know myself."

Beard enrolled in the Texas College of Osteopathic Medicine and found her life's work. She's still on the job, practicing in a manner deeply influenced by osteopathic tradition and her Health Science Center training.

Chatting with a visitor in her office, she explains her philosophy by reading aloud a part of the Osteopathic Oath, which she hands to all new patients: "I will be mindful always of my great responsibility to preserve the health and the life of



Marianne Beard, DO, pays a house call to Mary Bevilacqua.

my patients, to retain their confidence and respect both as a physician and a friend” She puts down the oath and says, “That sums up what I’ve always wanted to do.”

Math, physics, Fulbright and the Congo

Beard committed to serve others long before she became a doctor. As a young woman she joined the Sisters of St. Mary of Namur, an order of nuns dedicated to helping the poor. She graduated from the University of Dallas with a degree in mathematics and physics, then attended the University of Louvain in Belgium on a Fulbright Fellowship.

Her first teaching assignment took her even farther afield: to the interior of the Congo, where she worked with the Sisters of St. Mary to establish a teachers college. It was a tumultuous period; not long after she arrived, the revolution began that would win Congo’s independence from Belgium. Beard calls it a “fascinating and difficult time.”

After three years of missionary work, she returned to the States to teach, eventually instructing math and religion at Nolan Catholic High School in Fort Worth. She loved working with students and enjoyed her physics research. Yet science left her detached from human relationships.

Then came the monumental conversation with her sister. Soon after, she left the convent and began researching medical schools. She read about TCOM, and her response was immediate. “I thought, somebody has developed a branch of medicine for me,” she says. “So I didn’t apply anywhere else.”

She enrolled in the fall of 1981.

A matter of trust

Three decades later, her osteopathic approach still addresses the whole patient. For example, house calls “are for people who can’t come in, or it’s hard for them,” she explains. “Sometimes I really need to know how they’re living, because I have a feeling it’s worse than they’re telling me.”

Those patients trust her to help meet their most basic needs. There was the man in a nursing home who couldn’t afford false teeth, so he shared a set with his roommate. They ate in shifts. Appalled, Beard put a letter in her waiting room asking other

patients for donations. Soon the man was eating with his own teeth. She saw the well-being of this patient – of all of her patients – as her responsibility.

“To me, that’s another part of osteopathic medicine. If I’ve assumed your care, I’ve assumed all of the needs of your life that impact on your medical care.”

In time, Beard established the nonprofit Porch Light Foundation to manage gifts and donations. “It’s not a lot of money, but it’s enough so I never have to say you can’t have your medication. Never have to

say you can’t get a mammogram. You can get gravel for your driveway if it’s muddy and you can’t get out. Your kids can have school clothes. Anything that’s related to you, your life and your health, we’ll make sure it’s taken care of.”

It may seem a long way from false teeth and rice pudding to X-rays and advanced therapies, but to Dr. Marianne Beard they’re all part of her responsibility as a physician and a friend to her patients. It’s a responsibility she embraced in the oath she took upon becoming a doctor and a responsibility she lives out every day.



NORTH TEXAS HEALTH & SCIENCE



Where the Best Begins for Health

The UNT Health Science Center, located on 33 acres in Fort Worth's Cultural District, is exclusively a graduate-level university focusing on the life sciences. It is home to the Texas College of Osteopathic Medicine (TCOM), the Graduate School of Biomedical Sciences, the School of Public Health, the School of Health Professions, which includes the departments of Physician Assistant Studies and Physical Therapy, and the UNT System College of Pharmacy (scheduled to open in 2013). The Health Science Center is dedicated to improving the health and quality of life for North Texas and beyond through education, research, patient care and community outreach. UNT Health, our faculty physician group, is one of the largest multi-specialty physician practices in Tarrant County. The UNT Health Science Center is nationally ranked for primary care, rural medicine, family medicine, geriatrics, physician assistant studies and public health by *US News & World Report*.

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A NIGHT IN CASABLANCA

**TO YOUR HEALTH: PASSPORT TO NEW ADVENTURES
GALA 2012**

SAVE THE DATE FOR OUR ANNUAL FUNDRAISING GALA

The UNT Health Science Center invites you to attend its annual
To Your Health Gala, set for Saturday, November 10.

This year the gala, *To Your Health: Passport to New Adventures*, celebrates leadership in health science while supporting student programs for our new UNT System College of Pharmacy (SCP).

This year's gala theme is Casablanca. It promises to be an exciting way to begin the holiday season, with a reception, dinner and dancing in the grand ballroom of Fort Worth's Renaissance Worthington Hotel.

For more information, please call 817-735-2445.

www.unthsc.edu/ToYourHealth