

A WORD FROM TEXAS TECH

By Patti Patterson, MD, MPH, Vice President of Rural and Community Health, TTUHSC

Goal of Research Is to Develop Solutions

Research is a key endeavor of any academic health sciences center—and that is true for Texas Tech University Health Sciences Center. One of our priority initiatives is to increase peer-reviewed research activities and funding, particularly from the National Institutes of Health.

While much of the ongoing research is geared toward studying cancer and treatments, the causes and progression of dementia, and a host of other very technical biomedical science issues—there is also an emphasis on studying rurality as a determinant of health.

West Texas' changing demographics, population diversity, workforce issues, and geographic features create a complex environment of numerous interrelated factors affecting health status and the delivery of health care—an excellent opportunity for research that really can improve people's health, not just for people in West Texas but also for people who live in rural communities across America.

Why should research be important to folks living in West Texas? There are a lot of things that we don't know about the health of rural people. Does it make a difference in people's health (better or worse) to live farther away from medical services?

We know that trauma death rates are twice as high in rural counties than in urban centers, but we need to know more about how to prevent injuries and improve systems of rapid response.

Early data indicates that obesity rates are higher in rural communities than in urban. Why is that? What specific interventions will work in rural areas?

These are only a few of the questions that rural-focused research can address.

The NIH grant and the work of the West Texas Rural EXPORT Center expands our resources to conduct research focused on rural health issues. They also lay the foundation for larger research funding requests in the future.

The goal of our research is to turn statistics into solutions—not just doing research for the sake of research, but to make a difference.



TTUHSC opens new medical examiner facilities to better serve West Texas

Texas Tech University Health Sciences Center has opened new facilities in Lubbock as part of its role in providing Medical Examiner and autopsy services to counties across West Texas. The new state-of-the-art facility, located on South Loop 289 and Quaker, is expanded from the previous ME office located at the main TTUHSC campus building. Enlarged areas include more evidence storage and training facilities, as well as more autopsy suites. New high-tech equipment, such as an alternate light source used to observe trace evidence, improve the examination process.



“Our facilities have doubled in size, which allows us to better accommodate multiple cases. In the past, particularly with homicide investigations, we’ve only been able to process one case at a time to avoid any cross contamination issues. With the new facilities, we can handle multiple cases at the same time,” says Robert Byers, chief investigator and senior administrator for the Division of Forensic Pathology at TTUHSC. “In addition, we can better support an increased number of visitors and students pursuing training in forensic sciences.”

The newest addition to the ME facilities is the Sexual Assault Nurse Examiner (SANE). A SANE is a registered nurse who has received additional training and is certified to provide comprehensive care to sexual assault survivors, as well as conduct forensic examination and serve as an expert witness.

Texas Tech is under contract to provide full Medical Examiner services in Lubbock County, which includes everything from on-site death investigations, to processing of death certificates, to autopsies. In 88 other counties in West Texas, Tech provides autopsy services while local Justices of the Peace continue to conduct the death investigations. In 2003, the office performed 1,027 autopsies and in 2004, performed 967 autopsies.

Along with the autopsy service, the Office participates in training forensic investigators to serve the region. The office conducts an annual seminar to prepare field investigators, prosecutors, nurses and Justices of the Peace on the proper methods for processing a crime scene, collect evidence and conduct an investigation. This seminar is scheduled for May 2005. For more information, contact Robert Byers at (806) 743-7755 or Robert.byers@ttuhsc.edu.

The Lubbock County Medical Examiner System was established in 1994 by the Lubbock County Commissioners Court. Don McBeath, director of telemedicine and rural health for TTUHSC, served as Lubbock County Judge at the time and was instrumental in the creation of the ME office. According to McBeath “Lubbock County and West Texas were desperately in need of a more advanced and reliable death investigation system. It was obvious that Lubbock County should take the lead in this, being the largest county in the western half of the state, with the exception of El Paso.” Lubbock County turned to Texas Tech University Health Sciences Center for assistance in establishing the ME office and Tech played an informal role until 2000 when Lubbock County contracted with TTUHSC to provide all ME services.

The recently expanded ME facility will also allow TTUHSC to house the Texas Tech Institute of Forensic Sciences in the near future.

Big Country AHEC cont'd from page 1

Each AHEC Center is made possible by a partnership between Texas Tech University Health Sciences Center and a local community-based organization in each region. The host for the Big Country AHEC is the West Central Texas Council of Governments (WCTCOG), based in Abilene.

"We believe that this partnership will facilitate serving the rural citizens of this region," says Pam Danner, director of the West Texas AHEC Program. "WCTCOG has already done significant relationship-building across the region, and the services offered by the Big Country AHEC will definitely complement and expand the work already ongoing."

The mission of WCTCOG is

- to assist local governments to improve conditions for the health, safety, and general welfare of their citizens; and
- to plan for future development for the area, make efficient and economical use of public funds through regional coordination.

The West Texas AHEC Program has three other centers serving the Panhandle, Permian Basin and South Plains regions. Plans to open a fifth center in the El Paso/Big Bend region are under development.

Federal Research Grant cont'd from page 1

ture necessary to identify and coordinate synergistic activities among scholars—from both the TTUHSC and Texas Tech University campuses as well as other academic and health professional partners across the state—who possess significant expertise in various disciplines who have much to contribute to health disparities research.

The EXPORT Center has five core components:

- Administrative;
- Community Outreach and Information Dissemination, through partnership with the West Texas AHEC Program;
- Research which focuses on three leading determinants of health disparities in the region (low socioeconomic status, ethnicity and rurality) through studies on obesity, cancer and environmental health;
- Shared Resource, which provides assistance with data analysis, research design and grant development; and
- Training and Mentoring.

The research product generated from this grant will lay the foundation for a more extensive research proposal to NIH for future rural-focused research funding.

Rural Health Scholarships and Summer Academy Opportunities Available

The Office of Rural and Community Health has opened the 2005-2006 Rural Health Education Scholarship for undergraduate students at Texas Tech University who are pursuing education to be health care professionals. Scholarships are available for entering freshmen, junior college transfers and current TTU students.

The Office is also accepting applications for the Rural Health Summer Academy from college students who are preparing to enter allied health, nursing and pharmacy degree programs.

For more information on these programs, call (806) 743-1338 or go to www.ttuhscc.edu/ruralhealth/studentprograms.

Focus On

COMMUNITY HEALTH

The Office of Rural and Community Health will soon release a new publication about rural West Texas, its health care challenges and its role in addressing issues facing much of rural America. The book, which is intended for a national audience, highlights the region's contributions to the nation in agriculture and petroleum production; in addition, it identifies key rural-focused research opportunities that can enhance the health of West Texans and other rural residents across the country.

The book also outlines the efforts of Texas Tech University Health Sciences Center to educate and support Texas' health care workforce, particularly those who serve in rural Texas communities.

The primary purpose for the book is to provide information to community leaders, policy makers, educators and researchers about the significance of West Texas, and about the demographic and disease trends, already prevalent here, that are becoming more widespread across the country. What can be learned by studying these trends here can shape the future of health care access and health status for rural Americans in other parts of the country.

Look for the book in February. If you don't receive a copy and would like to request one, please call the Office at (806) 743-1338.



Telemedicine Report

Advanced Health Care Through Advanced Technology

Teleburn care celebrates third anniversary

The TTUHSC telemedicine burn program recently celebrated its third anniversary of assisting burn patients from the El Paso and southeastern New Mexico region with a pronouncement that the program has been a great success. And with such a success, the program is looking to expand.

Most serious burn patients in the Western half of Texas and much of New Mexico are transported to Lubbock's University Medical Center, which is the only major regional burn treatment center between Dallas and Phoenix. Upon release from their emergency treatment, many burn patients may face up to two years of follow-up visits for care, requiring multiple trips to Lubbock to be treated by a team of burn specialists. The telemedicine burn follow-up clinics were established by Texas Tech in El Paso in October 2001 so that El Paso area patients could avoid the 600-mile roundtrip to Lubbock.

Since the telemedicine clinics began from El Paso, more than 150 patient consults have been conducted electronically by the burn team in Lubbock. John Griswold, MD, and chair of the Texas



Above: Dr. John Griswold, chair of the TTUHSC department of surgery, evaluates the healing progress of a burn injury at a telemedicine follow-up appointment. There are plans to expand telemedicine to include emergency burn triage.

Tech University Health Sciences Center Department of Surgery envisioned the telemedicine burn follow-up clinics. Griswold says, "This program has exceeded our visions. We are saving patients and their families the expense and nuisance of a 600 mile trip." The surgery chair adds, "We believe the reduced travel and convenience of this program helps patients with the healing process."

Surveys over the past three years confirm that the El Paso area patients like the service. According to Claudia Cortez, telemedicine clinic coordinator, "Most of the patients like the availability of the burn follow-up services via telemedicine, and they consistently rate the quality of services as good as face-

to-face."

With the success of the program, there are plans in the near future to expand telemedicine burn care. Don McBeath, Director of Telemedicine for Texas Tech said "we hope to identify another community soon where a substantial number of burn patients are returning to Lubbock for follow-up care. We believe the most likely candidate may be Odessa."

McBeath and Griswold add that plans are also under development to conduct emergency burn care triage via telemedicine before patients are even transported to Lubbock. Telemedicine triage could result in some patients remaining in their community for all treatment.

Telemedicine 101:

Who Should Attend? Community leaders, elected officials, school officials, physicians, hospital and health care administrators

Attendees of the *Telemedicine 101* course learn about the basic operating principles of telemedicine, legal issues, funding, costs, applications, and technology.

For more information about upcoming courses, contact Debbie Voyles at (806) 743-1338 or debbie.voyles@ttuhsc.edu.

Want to learn about telemedicine?

Technology upgrade expands potential reach of telemedicine services

Texas Tech University Health Sciences Center is in the process of upgrading its entire telemedicine system to state-of-the-art video conferencing digital technology. In the plans for several years, the upgrade is now underway as funds became available in the summer of 2004. The upgrade requires retrofitting and replacing video conferencing and telemedicine equipment at 15 locations. The upgrade work itself is underway and will take into late spring 2005.

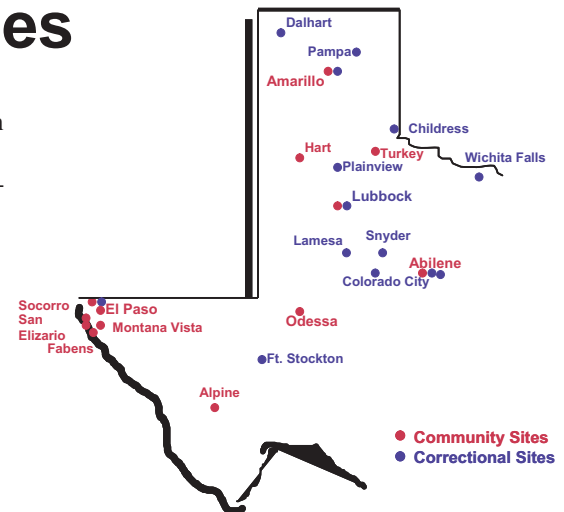
The primary benefit of the H.323-based technology is multi-fold. It

- Allows for on-demand utilization as opposed to monthly scheduling, which speeds up the technologic process of setting up a telemedicine clinic and improves efficiency.
- Incorporates point-to-point and multi-point capabilities, which allows sites to have video-conference meetings with each other—not just from the remote site to the hub site in Lubbock.

- Allows telemedicine to function over the TTUHSC computer network without the need of a duplicated second network, which was the case with the old telemedicine technology.
- Allows for a technical interface between the TTUHSC telemedicine network and the Internet, thus broadening the reach and capabilities of telemedicine.

These features are crucial to future telemedicine endeavors at TTUHSC. The upgrade will make it possible to link the emergency room of TTUHSC's teaching hospital, University Medical Center, to hospitals across the region at a moment's notice.

"Having the ability to link rural hospitals to the region's only Level I trauma center greatly increases rural health care providers' access to advanced care in emergency situations, benefiting both the patient and community," says Debbie Voyles, assistant director of telemedicine at TTUHSC.



Lynn Patterson, telemedicine technology coordinator adds, "The new telemedicine technology will also share a network with a new electronic medical records system being deployed to the prisons that TTUHSC is under contract to provide health care services. By sharing the network for both telemedicine and electronic medical records, the taxpayers will realize a savings of \$50,000 annually."

Health Science

U P C L O S E

The Second Degree BSN program—the first second degree nursing program in the state—is geared toward bachelor-degreed professionals seeking a career change to the nursing profession. Accelerated second degree programs are the fastest growing education programs in the country. Texas universities are opening six accelerated BSN programs this year—Texas Tech University Health Sciences Center is the only one offering it online.

"This degree program targets people who want to make a career change to the nursing field. We've seen lots of interest from people who formerly worked in the technology sector," says Pat Allen, RN, EdD, associate professor in the TTUHSC School of Nursing. "This program targets a population segment who would not necessarily seek an associate's degree in nursing. With this accelerated program, we are able to more quickly meet the education needs of this audience as well as place nurse graduates into the nursing workforce."

As with the TTUHSC RN to BSN program, the second degree program is entirely online with community-based clinical experiences that enable the students to remain in their home communities. The community clinical experience is facilitated by nursing faculty in Lubbock and the Hill Country campus at Austin Community College.

Students can earn the second bachelor of science degree in nursing in one year. The program's first cohort of students began classes in January 2005.



AHEC Update

WEST TEXAS AREA HEALTH EDUCATION CENTER PROGRAM

aka Science—encouraging kids to enjoy science as part of every day world



Kids learn better what they discover for themselves. The key is to make science fun.

Left: Lauren Sullivan, from the AHEC of the Plains, assists young scientists with an experiment. **Below:** Students cut out paper airplane models to study how well different designs fly.



What do you want to be when you grow up? The goal of the West Texas AHEC Program is to encourage children to think about being a doctor or nurse or pharmacist or radiologic technician—just to name a few of the opportunities in health care.

Developing an enthusiasm for science is a critical first step to building a kid's interest in a health career. That enthusiasm may or may not come naturally to a young kindergartner or first grader—but that creative spark can quickly be quelled if teachers and parents don't encourage young minds to question the environment around them.

Kids that don't like science by the time they are in the third grade—and don't feel confident asking and answering questions about the world around them—probably won't develop an interest in science later, according to studies.

That's why the West Texas AHEC program offers an informal science enrichment program to schools across the region. "All Kids are Scientists"—or aka Science—is geared for pre-K through

6th grade students, either as a supplement to classroom science curricula or as an afterschool program.

The core concept of aka Science is to encourage children to observe their world by exploring and experiencing the science of how the world works. Kids are asked questions—and encouraged to ask more questions of their own—as they do hands-on experiments to learn science basics.

Kindergartners and first graders may be asked: How does color move and change through absorption? Or when is energy transferred from one thing to another? And 2nd and 3rd graders may find out how water pressure can be used to make a water turbine. Students in the 4th–6th grades learn how to create a model volcano to better understand how volcanoes work.

"The benefit to this kind of learning is that kids better remember things that they discover for themselves," says Shannon Kirkland, student programs coordinator for the West Texas AHEC Program. "And the informal, hands-on

activities of aka Science make science fun for both teachers and children—it's not just textbooks and memorization."

Aka Science, a program of Hands-On Science Outreach, Inc., is a three-year cycle of activities so that a child from age 4 through 12 can participate every year without ever repeating an activity.

The three core themes are Structure and Change, Science Patterns, and Energy, which are broken down into age-appropriate activities to teach young learners how to ask questions about the world they live in.

For more information about aka Science and how your school can incorporate it in the elementary classroom, contact Shannon Kirkland at (806) 743-1338.



Above: CATCH curriculum materials are presented in age-appropriate formats. The toolbox for PE teachers is full of activity resources that target all aspects of good physical health. **Right:** Children enjoy free play time before exercising.

West Texas AHEC expands CATCH assistance to more area schools



This fall the West Texas AHEC expanded its CATCH curriculum assistance to fifteen more rural school districts, bringing the total number of West Texas school districts served to 41.

The West Texas AHEC provided the actual curriculum and hosted the one-day training workshops, which were held in Amarillo and Midland in early January.

Texas state law now requires elementary schools to implement by 2007 a coordinated school health program approved by the Texas Education Agency. Because this was an unfunded mandate, many school districts have struggled with implementation.

“Part of the West Texas AHEC’s mission is to promote healthy living,” says Pam Danner, director of the West Texas AHEC program. “Encouraging healthy behavior choices needs to start early in a child’s life. CATCH’s approach teaches children how to make choices, provides opportunities for parents to get involved at home, and enhances PE activities.”

CATCH stands for Coordinated Approach To Child Health (formerly

known as Child and Adolescent Trial for Cardiovascular Health) which was the largest school-based health promotion study ever done in the United States. This program includes K-5th physical education “CATCH PE”; heart health classroom curricula and family components, an “Eat Smart” school nutrition program guide for school cafeterias, and Family Fun Night activities. The CATCH classroom component is designed to align with other core subjects, providing age-appropriate lessons and activities that allow students to incorporate information and skills learned in other subjects. For example, while students learn in science how the heart pumps blood through the body, the CATCH activity teaches them how exercise helps to make the heart healthier—and students get a chance to practice math skills by measuring and graphing their resting and active heart rates.

“The most exciting part of CATCH is the physical education component,” says Jim Fitch, center director at Permian Basin AHEC. “PE teachers get

a toolbox of activity resources. In the schools where CATCH PE is being used, PE teachers and kids love it. CATCH PE is designed so that kids are active for the entire time, with very limited time spent waiting turns. Teachers spend more time guiding supervised activity that includes everyone.”

The CATCH curriculum meets TAKS and TEKS requirements, and it has been designed so that materials can be reused year after year without additional cost.

For more information about CATCH, visit the CATCH website at www.sph.uth.tmc.edu/catch/index.htm or contact your area’s local AHEC center.

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