



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™

F. Marie Hall Institute *for*
Rural *and* Community Health



ANNUAL REPORT

FY 2022-2023



F. Marie Hall Institute for Rural and Community Health

MISSION & VISION

The F. Marie Hall Institute for Rural and Community Health exists to work in close collaboration with the people of West Texas for the advancement of health through innovative and scholarly research, the advanced use of technology, comprehensive education, and community outreach.

We thank you for allowing us to spend our time with purpose and to strive each and every day to make the world a better place.



Table of Contents

01	Mission & Vision	19	T-CORE
03	Letter from the Director	21	T-CORE Research Project
04	Service Area Map	23	West Texas AHEC
05	Serving West Texas	25	Rural Student Health Sciences Mentorship Program
06	Administrative Team		
07	Contracts, Grants, and Publishing Team	26	High School Telemedicine Certificate Curriculum
08	Rural Emergency Hospital Designation		
09	Innovative Healthcare Transformations	27	DSHS Health Equity Grant
11	Frontiers in Telemedicine Lab	28	<i>Rural Health Quarterly</i> Advisory Board
12	FIT Certificate Course	29	<i>Rural Health Quarterly</i>
13	TexLa Telehealth Resources Center	30	Web and Information Technology Team
14	Clinical Encounters/Project ECHO	31	Grants, Applications, and Awards
15	Broadband Pilot Project	32	Funding for FY 2022-2023
17	Data & Analytics Team	33	Offices/Boards/Committees
18	Social Determinants of Health Project		

©2023 TTUHSC

All Rights Reserved. Reproduction of this report or any portion thereof is strictly prohibited.

Letter from the Director



**BILLY U. PHILIPS, JR.,
PH.D., MPH**

Organizational change is an inevitable part of today's fast-paced and dynamic health care environment. The combination of workforce shortages, technological innovations, and the vagaries of payment models all seem to fuel the pace of health care change. The F. Marie Hall Institute for Rural and Community Health (FMHIRCH) is experiencing these kinds of changes at TTUHSC. The primary concern of the West Texas AHEC program is the health workforce – ranging from the Scholars program to enticing promising students into health careers to alternative career lines such as Community Health Workers and a first-of-its-kind High School Telemedicine Curriculum. One of the most exciting new developments is the creation of the Institute for Telehealth and Digital Innovations (ITDI), which will build on the solid foundation of the TexLa TRC, the FiT Lab, the Telehealth ECHO, and the support of clinical telehealth. The good work of helping rural hospitals and clinics survive COVID and reimbursements that leave many in financial distress has led to the Rural Emergency Hospital Project and the Community Conversations Grant. For the FMHIRCH, change is a part of the fabric of contributions that will lead to new, smarter work, and new purposes that go beyond us on behalf of the people of West Texas.

Like always, the changes have been an exciting time, a frustrating time, and a time that will produce more than we can imagine. I will illustrate three examples of things that need to happen within the FMHIRCH for us to remain competitive and relevant. This is the beginning of a season of change that will see reorganization, restructuring, and repurposing around a clearer vision of rural health issues and what solutions we may offer or can prove to work and be scalable. One such initiative is the Next Gen 911 Project, which has the potential to link telehealth services to the statewide 911 network. Critical to an effective change process are the people of the FMHIRCH, all of whom will play pivotal roles in driving and adjusting to these transformations, and, perhaps even more critical, are the people who are our community partners.

If you ask, the FMHIRCH has been a people-first type of organization. One of the reasons for that is that we are adept at change because that is the environment in which we work. Everyone knows that there are mixed emotions when change happens. Fortunately, we have good leadership at TTUHSC that recognizes the signs of uncertainty and tries to provide a sense of empowerment among the team members so they can know that one doesn't have to feel powerless but empowered to make change an opportunity for progress. For those who are feeling anxious, optimism and stability are important. For those in between these poles, one key is taking the long vision. A great example is the Institutional Master Planning which has established a comprehensive, overarching plan for the next decade that considers each of the six campus entities and opportunities to enhance common platforms, core programs, and physical facility utilization. Fortunately, the FMHIRCH has been a part of that process.

As we have changed over the years, the one constant has been communication, especially having everyone understand the reasons behind the change, providing a sense of direction even if we had to do mid-course corrections, to involve every member of the team in providing their sense of what the changes might be, why they may be necessary and to articulate a personal sense of direction and purpose. We are about to engage in strategic planning, which will involve our community partners. We hope to produce a plan that will not only guide us strategically but has the tactical steps to optimize the FMHIRCH as it continues to synergize our efforts in unique ways to contribute to the growth that comes with change. That is important because over the past 15 years opportunities have come our way that we did not fully anticipate but had to respond to in achieving our mission.

When reading about workforce shortages and post-COVID changes in health care, two words are used almost interchangeably: resilience and flexibility. Literature on resilience shows some traits that seem interconnected: Optimism, sense of humor, emotional awareness, self-control, and a healthy measure of grace and gratitude. In our experience, these are the things that enable individuals to embrace new opportunities. Certainly, in pioneering past efforts such as the FiT Lab, the Community Needs Assessments, and the Proof of Concept for things that became statewide assets such as TWITR, we depended on every one of those traits to maintain our own resiliency as the FMHIRCH team.

Our TTUHSC mission is health care transformation through innovation and collaboration. When that is achieved, it has been our usual practice to just do the work, but not "toot our own horn about it". We must change that culture so collaboration, problem-solving, and continuous quality improvement are encouraged. Creating platforms for knowledge-sharing and skill development has been more than just training programs. Rural health is dynamic, after all, and mentorship opportunities have been as important to promoting a culture of adaptability as anything we have done. That is why the FMHIRCH has meaningful student scholarships in each school of TTUHSC and why we support the rural health fellows' program. We have always celebrated and recognized those who successfully navigate change. It's not only fun to do, but it is also inspiring to others.

I could go on with many other examples of the importance of the FMHIRCH within the broader efforts of TTUHSC and rural health issues. As organizations undergo reorganization, restructuring, or repurposing, the ability of individuals to adapt becomes a critical factor in their overall success. By fostering resilience, flexibility, effective leadership, a supportive culture, and addressing resistance, we think the FMHIRCH has been an exemplar of empowerment of individuals and communities to embrace change and navigate through it. That really is the core deliverable of the FMHIRCH. If we prepare for change, we will be ready for things we have not yet encountered or imagined. COVID was the first major event, but there will be more. Ultimately, we will continue to ensure long-term sustainability and growth by embracing and adapting to change as a necessary and valuable skill in today's ever-evolving rural health landscape in West Texas and far beyond.

Sincerely,

~ Dr. Billy U. Philips, Jr.

Executive Vice President for Rural and Community Health, Director of the F. Marie Hall Institute for Rural and Community Health, Professor of Family and Community Medicine (SOM), Professor of Public Health (GSBS)

Service Area Map

 TTUHSC F. Marie Hall Institute for Rural and Community Health


★ TTUHSC Area Health Education Center Office

▲ Managed Care

● Community Telemedicine Sites

◆ Other Telemedicine


West Texas AHEC Regions


 AHEC of the Plains

 Panhandle

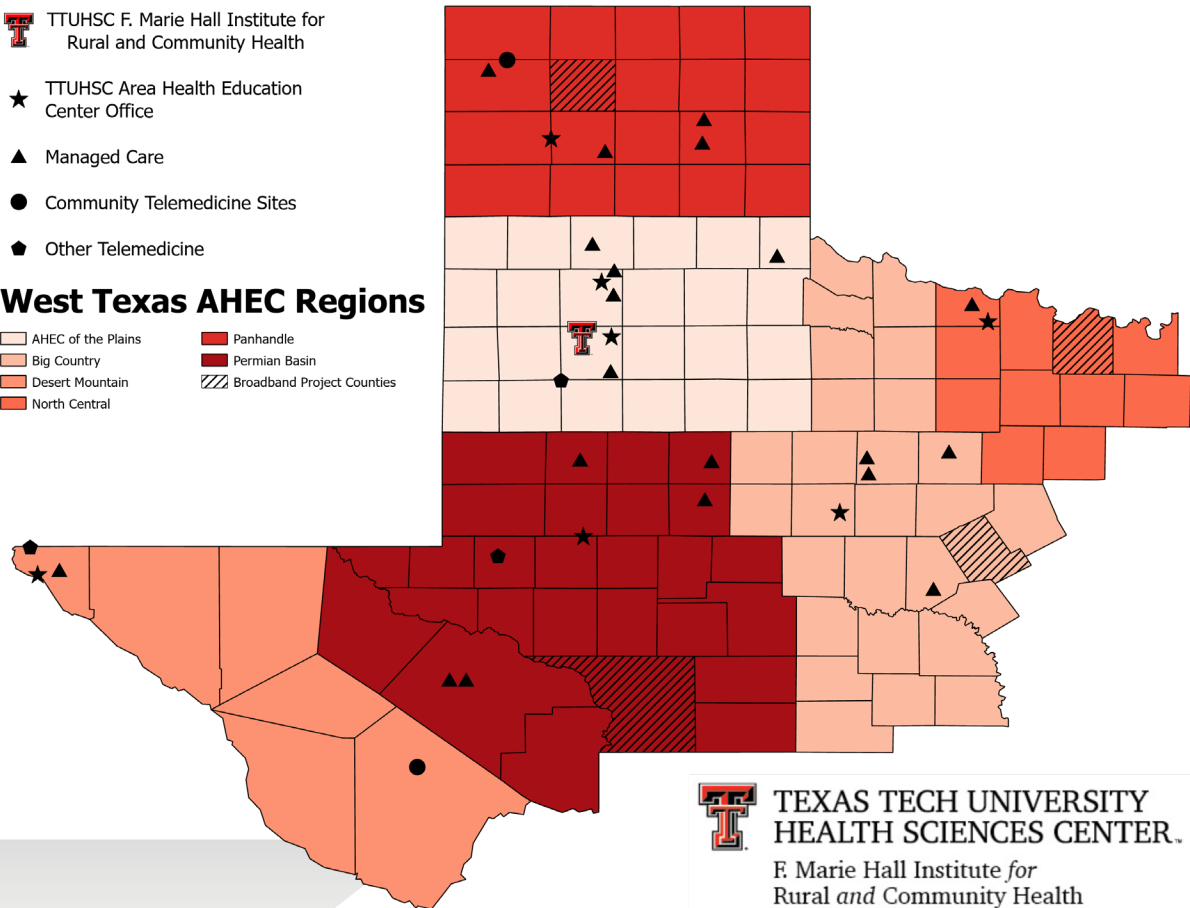
 Big Country

 Permian Basin

 Desert Mountain

 Broadband Project Counties

 North Central



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER

F. Marie Hall Institute for
Rural and Community Health

Serving West Texas

The mission of the F. Marie Hall Institute for Rural and Community Health (FMHIRCH) is to work in close collaboration with the people of Texas for the advancement of health through innovative and scholarly research, the advanced use of technology, comprehensive education, and outreach. Through innovation and collaboration, the FMHIRCH strives to bring healthcare access, education, and resources to its rural, underserved service region – an area that spans slightly more than 131,000 square miles and is about the size of Germany.

Rural health access is essential to supporting the food, fuel, and fiber industries that are the backbone of the Texas economy. With a declining and aging workforce, a strained rural health care system, and far-reaching health disparities in West Texas, the existence of the FMHIRCH has never been more crucial. The FMHIRCH will continue to bridge the healthcare gap in the communities it serves in West Texas and beyond through technology, education, and research.

OUR TEAMS



HEALTH EDUCATION

Transforming Communities through Outreach, Recruitment & Education (T-CORE) coordinates educational activities to engage students who want to enter the healthcare workforce. Community health worker outreach, the AHEC Jr. Scholars program, and revamping a telemedicine curriculum tailored to high school students are just a few of T-CORE's projects from the 2022-2023 fiscal year.



HEALTH TECHNOLOGY

Innovative Healthcare Transformations (InHT) is a trusted advisor and resource for the adoption, implementation, and effective use of telehealth resources. InHT also promotes an innovative future for rural healthcare through its FIT Lab and the Telehealth Taskforce of the Clinical Council at TTUHSC.



HEALTH RESEARCH

The FMHIRCH creates leading-edge research that focuses on rural health solutions in West Texas and the 108-county TTUHSC service area. That research is published in peer-reviewed journals and the *Rural Health Quarterly*, which is indexed on the Rural Health Information Hub.



Administrative Team

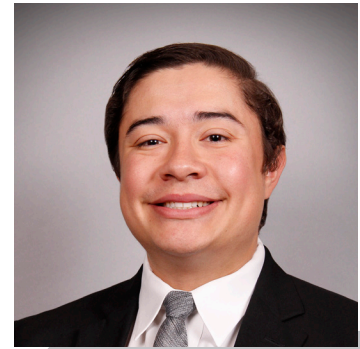
Five departments work together at the F. Marie Hall Institute for Rural and Community Health to bring its mission to fruition. The Administrative Team supports the Institute as a whole through members' specialized knowledge of finance, human resources, and office support. The Administrative team also supports Executive Vice President and Institute Director, Billy U. Philips, Ph.D., in his many roles within the Institute and at TTUHSC.



SARAH LOOTEN, MPA
Director of Staff Relations



DENISE LOPEZ, MBA, MS
Director of Finance



ISAIAH THOMAS, JD
*Contract Development
Manager*



DOLORES PARRISH
Assistant for Staff Relations



DEBORAH MCCARTY
Executive Associate



SUE DAVIS
Senior Office Assistant

Contracts, Grants, and Publishing Team

The Contracts, Grants, and Publishing (CGaP) team supports the contracting, grant writing, publication development, and editing needs of the Institute. CGaP negotiates, drafts, and manages the contractual agreements of all divisions of the FMHIRCH. It also contributes to and guides the grant writing process. The group also publishes a quarterly magazine, the *Rural Health Quarterly*, which seeks to shed light on rural health matters and ranks states' rural healthcare each year in the Report Card issue. The RHQ is a free publication and is indexed on the Rural Health Information Hub.



JILLIAN RUSSELL, JD
*Director of Contracts, Grants, and
Publishing*



CLAIRE CHRISTOFF, MA, MFA
Senior Editor



CANDICE CLARK, MA
Senior Editor



AMBER C. PARKER
Lead Writer

Rural Emergency Hospital Designation

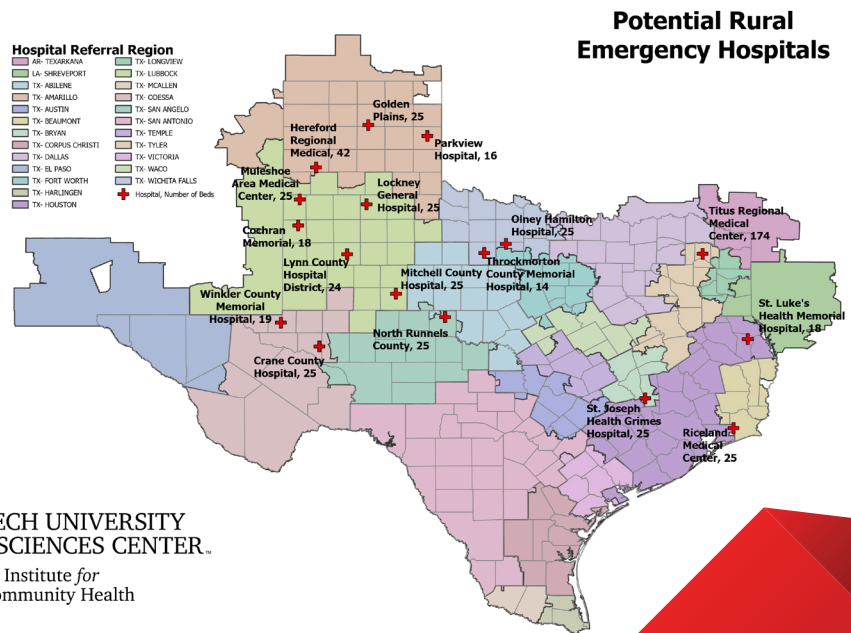
It's no secret that rural hospitals across the country are in serious financial turmoil, with many either cutting services or shutting its doors over the last few years. A report from the USDA found one in seven Americans live in rural communities with limited access to health care and higher rates of chronic illness.

In April 2023, the FMHIRCH entered an agreement to collaborate with the Texas A&M Health Science Center Rural and Community Health Institute (ARCHI) to start a program to educate rural hospitals in **108 West Texas counties** about the **Rural Emergency Hospital (REH)** designation. The REH designation is aimed at helping rural hospitals keep critical outpatient hospital services available to the community.

As part of this collaboration, the FMHIRCH held several webinars with hospitals throughout the region and state to educate them on the new REH program and how it could possibly save their community's line to healthcare. FMHIRCH also visited different hospitals in Hereford, Lynn County, Muleshoe, and Moore County to provide REH resources, including education and technical assistance. More site visits are planned for FY24 for hospitals in Dumas, Hereford, Muleshoe, and Morton.

Before a rural hospital can convert to an REH, it must provide several critical amenities, including 24-hour emergency services, laboratory and radiology services, and a pharmacy. The ED of a REH must be staffed around the clock, all year long, and an MD, DO, PA, NP, or CNS with emergency care training must be on duty or on-call and able to be at the hospital within 30 minutes in an emergency.

The FMHIRCH is dedicated to helping guide West Texas hospitals so they can afford to stay open to help keep their communities thriving and healthy.



 **TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER**
F Marie Hall Institute for Rural and Community Health

Innovative Healthcare Transformations (InHT)

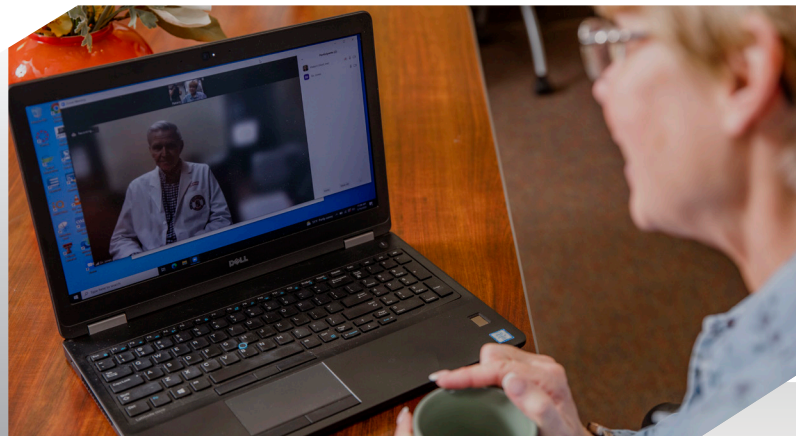
The Innovative Healthcare Transformations (InHT) division works to provide better access to healthcare for people throughout West Texas. InHT delivers technical support for telemedicine through the TexLa TRC and supports the adoption, implementation, and effective use of telehealth resources. The team offers training and education to providers, patients, and stakeholders through educational courses, webinars, trainings, conferences, and other resources.

InHT's innovative Broadband Pilot Project, a three-year pilot, had a successful second year. It works to assess available broadband capacity for rural health care providers and communities in six rural Texas counties with the ultimate goal of improving access to telehealth services. **796 patients** accessed care through telemedicine clinics supported by InHT staff, furthering Institutional goals of innovation and collaboration.

The state-of-the-art **Frontiers in Medicine Training Laboratory (FiT Lab)** continues to train West Texas providers in telemedicine technology and helping to reduce barriers to healthcare access related to distance.



**DERRICK RAMSEY,
BBA, M.ED.**
*Director of Innovative
Healthcare Transformations*



InHT Team



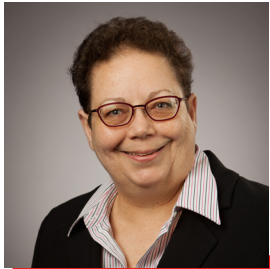
KELLY MUNOZ
InHT Project Manager



YOGIS MAYOORAN
Financial Analyst



MAX RICHARDS
FiT Program Manager



LISA WYNN
Senior Office Assistant



LAURA RAUWALD
Clinical Manager



AARON COOK
IT Support Specialist



SKYLER DIXON
Financial Analyst



ANAKIN NINO
Student Assistant



RANCE STANDRIDGE
Technology Manager



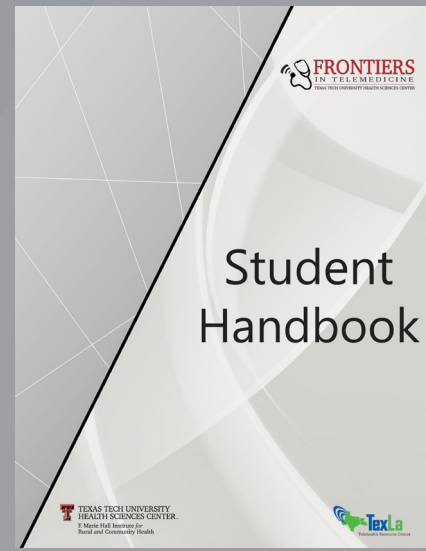
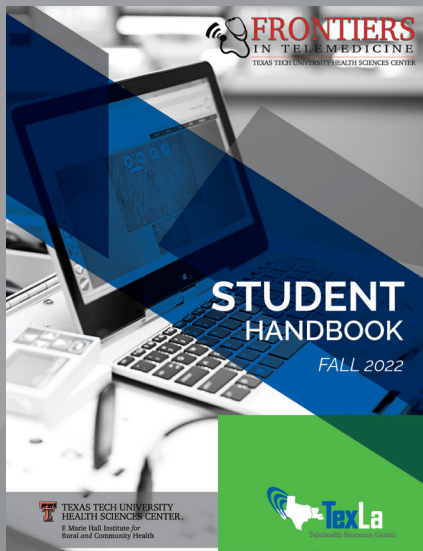
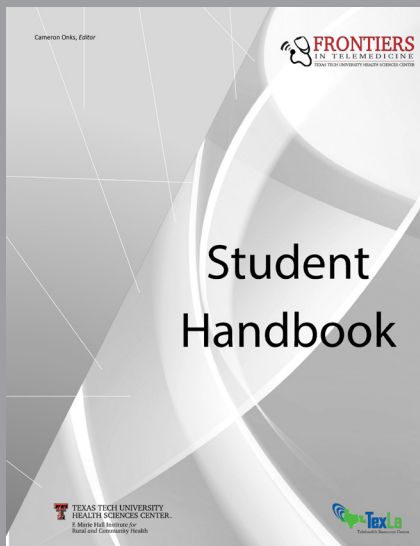
MICHAEL MANGEL
*Broadband Program
Manager*

Frontiers in Telemedicine (FIT) Lab

The Frontiers in Telemedicine Course was launched in 2016 as a unique program to train clinical staff to effectively use telemedicine. Today, the program focuses on competency-based learning and requires students complete hands-on simulation center training, online modules, and objective structured clinical examinations (OSCEs) designed to educate and measure knowledge of telemedicine equipment, procedures, etiquette, and ethics. The program also trains licensed health care professionals who would like to gain a certificate of completion in telemedicine.

After completion of training, students should be able to:

- Demonstrate the basic knowledge of telemedicine and telehealth and define who can benefit from the technology.
- Demonstrate knowledge of the originating/patient site and distant/provider site, as well as the clinician and staff roles at each location.
- Demonstrate knowledge of the operation of telemedicine technology.
- Demonstrate knowledge of a telemedicine encounter.
- Demonstrate the basic ability to assess a patient in the ambulatory telemedicine setting.
- Demonstrate the knowledge required to present and manage a patient with a specific problem.
- Demonstrate communication skills in patient and medical team communication.



FIT Certificate Course

The Frontiers in Telemedicine Certificate course is the training program for clinical staff that covers telemedicine technology, clinical encounters, billing, and ethics. The FiT Lab Telemedicine course was updated to reflect the changes to telehealth as a result of the PHE and policy updates. The FiT Lab Certificate course is now fully online, utilizing a new and more engaging pedagogical approach to provide training necessary for providers to navigate the different approaches to a successful telehealth implementation.



57 providers were trained in the FIT lab in FY 2022-2023

FIT Lab courses were conducted via Zoom and were 100% self-paced.



FIT Lab content was converted to accommodate online learning.



TRAINING CLINICAL STAFF

Since February 1, 2016, the FIT Lab has trained **469 professionals** in Emergency Medicine, Dermatology, Psychiatry, Pediatrics, Internal Medicine, and various Public Health specialties, as well as department chairs from multiple TTUHSC campuses.

TexLa Telehealth Resources Center

The TexLa Telehealth Resource Center (TexLa TRC) is a program designed to provide technical assistance and resources to new and existing telehealth programs throughout Texas and Louisiana. Federally funded by the U.S. Department of Health and Human Services through the Health Resources and Services Administration (HRSA), TexLa TRC is one of 14 Telehealth Resource Centers in the country. TexLa TRC collaborates with external stakeholders and the other TRCs to promote best practices. The overarching goal of TexLa TRC is to make healthcare services easily accessible by expanding telehealth into rural and underserved communities and beyond.



TECHNICAL ASSISTANCE



130
CLIENTS ASSISTED
IN FY 2022-23

As part of its mission, TexLa TRC provides technical assistance to healthcare facilities and providers in Texas and Louisiana. This fiscal year, **130 clients** were provided tools, resources, and information regarding telehealth technology, policy, and reimbursement.

OUTREACH AND EDUCATION



3K
OUTREACH CONTACTS
IN FY 2022-23

In FY23, TexLa TRC reached 3,151 people through outreach and education initiatives. These include the 2023 Telehealth at the Crossroads Conference, workshops, and social media interactions.

TexLa Telehealth Resources Center



Project ECHO

The TexLa TRC-funded ECHO program is an infrastructure for sharing knowledge, and it is designed to create virtual communities of learners by bringing together healthcare providers and subject-matter experts in a virtual space. Continuing Medical Education (CME) credits are issues for eligible participants, and the sessions serve to educate and bring issues to the forefront in telemedicine practice for various providers. Providers are also allowed to collaborate with external and internal partners in the pursuit of best practices.

TOPICS COVERED

Telesurgery - Echoing Remote Surgery to Distant Locations • Telehealth in Emergency Medicine: Current and Future Trends • Building a Telemedicine Center of Excellence: UMMC Experience • Telehealth Infectious Diseases: Integrated, Multi-state Care • Applying for USDA Rural Utilities Service - Distance Learning and Telemedicine Grant • Evolving Telehealth Flexibilities: Navigating Out of the PHE into the New Normal • Chronic Kidney Disease Education: Tele-platform Challenges - Lessons Learned • Artificial Intelligence Ethics In Healthcare • Dementia Care in the Era of Telemedicine: A Clinical Perspective in Rural America • Democratizing Access to Hepatitis C Treatment and Beyond • Cybersecurity in Healthcare

Clinical Encounters

More patients received health care in telemedicine clinics supported by the InHT team. **796 patients** were seen in FY23, including **727 Correctional Patient encounters** through TTUHSC Managed Care and **69 Patients** seen in Community Clinics, which provide patient services such as rural-based specialty care and Hepatitis-B virus clinics for uninsured and underserved patients.

796
Clinical
Encounters

727
Correctional
Patients

69
Community
Patients

11

**ECHO
Sessions**

472

Participants



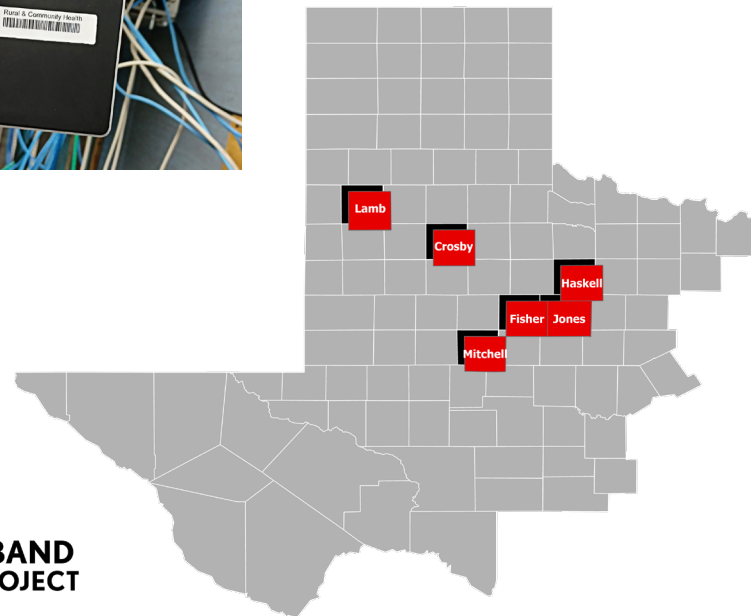
Broadband Pilot Project

InHT is in the second year of its work on the Broadband Pilot Project, which seeks to link federal initiatives at the U.S. Department of Health and Human Services, the U.S. Department of Agriculture, and the Federal Communications Commission to assess the broadband capacity of healthcare providers and patients in rural areas. Through a sub-award from the Alaska Native Tribal Consortium, InHT is working in six rural West Texas counties to measure broadband speeds and collect data with the ultimate goal of improving broadband access to promote telehealth in rural areas of the state.

To date, more than **100 devices** have been deployed, which has resulted in more than **800,000 speed tests** within the study area. This project is expected to receive a no-cost extension to continue until 2024.



Beacon used in Broadband Pilot Project to measure broadband internet speed.



Broadband Pilot Project

The goal of the project is to collect accurate data to support future broadband deployment efforts.



Scan for more information or to learn how you can help.



Data & Analytics Team

Data & Analytics (D & A) is FMHIRCH's health research team. They are working on a number of projects, including a new Rural Health Atlas, data validations for NextGen 9-1-1, and the Telemedicine Pilot Program.

Community Health Needs Assessment

The D & A team conducted the statistical analysis and interpretation of the findings for the Community Health Needs Assessment Report conducted for four different counties (Comanche, Crockett, Montague and Moore) as part of the DSHS funded community conversations grant. The team supported this report with data and analytics specifically in the entire data collection for the four counties, Texas and the US, and also conducted data validation, evaluation and business intelligence (BI) analysis. Data was collected from diverse sources, notably from the American Community Survey-US Census Bureau, CDC-WONDER, County Health Rankings and Roadmaps (CHR&R) and other reliable public data sources. Additionally, graphs were created using two BI tools, Tableau and Microsoft Power BI, to display the trends in the various metrics incorporated in the report.

MSSRP

The team also hosted two medical students this summer for their Medical Student Summer Research Project (MSSRP). The eight-week intensive research and data analytics training introduced the students to the data cycle, data search, collection, cleaning, validation and the use of Microsoft Excel for data analytics. Also, the students were introduced to the diverse and reliable public data sources where they could retrieve data for their research. Both students' research projects focused on certain areas of health disparities, prevalence of diabetes, food insecurity and food deserts of rural Texas. With supervision, the students practiced and utilized the skills and knowledge acquired to spearhead their research project and are expected to deliver a poster presentation in March 2024.

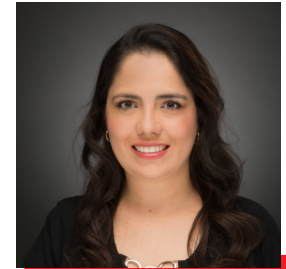
Overall, their level of participation and dedication showed how satisfied they were with the training during the summer as they extensively learned about data and analytics in research.



DR. GIPSY BOCANEGRA
Director of Data and Analytics



GRACE FOSU, MS
Research Associate



DR. DIANA VARGAS-GUTIERREZ
Research Associate



RHONDA ISOME
Senior Office Assistant

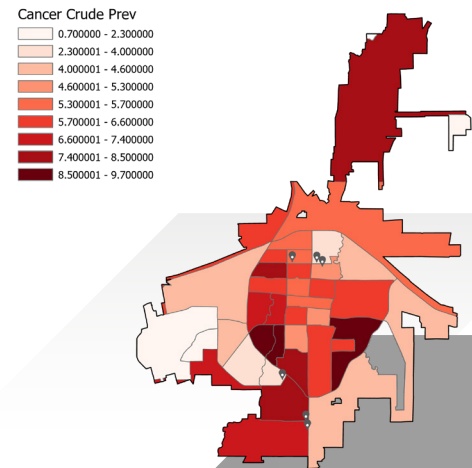
Social Determinants of Health Project

The Centers for Disease Control [1] defines Social Determinants of Health (SDoH) as conditions that affect people where they live, learn, work, and play and contribute to health outcomes because they are risk factors for many disease conditions. Some estimate these SDoH factors account for between **30-55% of disease outcomes**, which can be more impactful than health care or lifestyle choices. [2] A critical appraisal of SDoH, published in August 2020 [3], focuses on this age-old conceptual framework of public health and recently of progressive policies by governments around the world. The U.S. health care system is responding in two important ways, through accreditation of hospitals and related facilities that have a criterion related to how well the facilities engage their communities and manage population health with preventive and other programs that focus on reducing the burden of diseases. Upcoming changes in payment mechanisms are going to reward health care providers, mostly hospitals, that work to reduce SDoH. By keeping the communities healthy and managing risk factors of expensive-to-care-for diseases, the cost of care can be reduced and refocused to provide a better value and healthier outcomes. We think studying how SDoH, specifically the effects on health and wellbeing, will lead to more prevention care and health promotion programs. The idea is to understand the interplay of factors so that precision medicine can be achieved that is meant for a particular population in a particular community. In other words, one-size-fits all options should become a thing of the past. Moreover, we want to help our providers avoid the penalties that will be levied through what will be reimbursed and to avoid the suffering that goes with disease burden. We think that prevention is better than cure, access to care is better than deferring needed services, and that providers and consumers will be more satisfied with the system.

SOCIAL DETERMINANTS OF HEALTH



Cancer Prevalence in Abilene



Source: 500 Cities Project, Census Tract-Level Data, 2019 Release

[1] Social Determinants of Health | CDC
 [2] www.who.int/health-topics/social-determinants-of-health
 [3] Int J Environ Res Public Health. 2020 Aug; 17(16): 5856.

Transforming Communities through Outreach, Recruitment & Education (T-CORE)

Education, outreach, youth recruitment, and
community health worker training.

The **Transforming Communities through Outreach Recruitment and Education (T-CORE)** division provides continuing education and career development opportunities to rural West Texas through the West Texas AHEC.

The six regional offices in Abilene (Big Country AHEC), Amarillo (Panhandle AHEC), El Paso (Desert Mountain AHEC), Midland (Permian Basin AHEC), Plainview (AHEC of the Plains), and Wichita Falls (North Central AHEC) coordinate pipeline activities to recruit students and job seekers to enter the healthcare workforce.

West Texas AHEC also creates and distributes H.O.T. Jobs, an online tool and publication that highlights healthcare career opportunities throughout West Texas and the state.

West Texas AHEC's mission is to increase healthcare professions training capacity, provide community-based clinical training, and support the retention of healthcare professionals in high-need areas throughout West Texas.

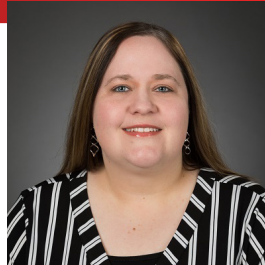


**CATHERINE HUDSON,
MPH**
Director of T-CORE

T-CORE Team



WENDY BRYAN, MBA
T-CORE Project Manager



MICHELLE CRUMP
Senior Office Assistant



JESSE JENKINS, CHW
Database and Reporting Specialist



**OLUGBENGA OLOKEDE,
MD, MPH**
Research Associate



**MADISON DELEON,
CHW**
Specialist IV



EVA GARZA, CHW
Specialist IV



**RACHEL FLORES,
CHW**
Specialist IV



**FRANCES QUINTERO,
CHW**
Unit Manager



**REBECA LLANAS,
MSW, CHW**
*Health Career Promotion/
Outreach Coordinator*



**TONI CAMPBELL,
CHW**
Specialist IV

T-CORE Research Project

This fiscal year, T-CORE initiated a research study to identify socio-cognitive and environmental factors that determine a student's choice of healthcare profession. The study included a questionnaire to survey various healthcare professions students across TTUHSC campuses and West Texas. The goal is to understand the factors that influence the student's decision of whether to practice in a rural area following completion of their programs of study. Billy Philips, Ph.D., MPH, is the Principal Investigator, and the Co-Investigators are Olugbenga Olokede, MD, MPH, Cathy Hudson, MPH, and Gipsy Bocanegra, Ph.D.

The study is complete and results were presented as a poster at the **National AHEC Organization's 2023 Biennial Conference.**

UNDERSTANDING THE CHOICE OF HEALTHCARE PROFESSION BY COLLEGE STUDENTS IN WEST TEXAS

Olugbenga Olokede MD, MPH, Catherine Hudson, MPH, Gipsy E. Bocanegra, PhD, Billy U. Philips Jr., PhD

Introduction

Many parts of West Texas are designated Healthcare Professional Shortage Area (HPSA) due to a number of factors including rurality.¹

This challenge can be addressed by increasing the number of rural students who choose a healthcare profession as a career.²

Certain behavioral and environmental factors influences the choice of healthcare profession by college students. Studies that shows this association is lacking in West Texas.

This study seeks to examine factors that influence a student's choice of a healthcare profession.

We posit there are certain behavioral, personal, and environmental factors such as encouragement from parents and teachers, high school grades and experiences, that influence a student's choice of healthcare as a profession and location of practice.

Objectives

To collect information on behavioral and environmental factors that influenced the choice of first year college students in five TTUHSC campus sites in West Texas in various healthcare professions.

Methods

A Qualtrics survey study was conducted among first year TTUHSC students from regional campus sites.

Questions about their personal, behavioral and environmental factors as it influence their choice of profession using validated instruments were asked.^{3,4,5,6}

Student preference of location of practice after completion of their program was also asked.

Descriptive analysis was done using SPSS.



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™

F. Marie Hall Institute
Rural and Community Health

T-CORE Research Project

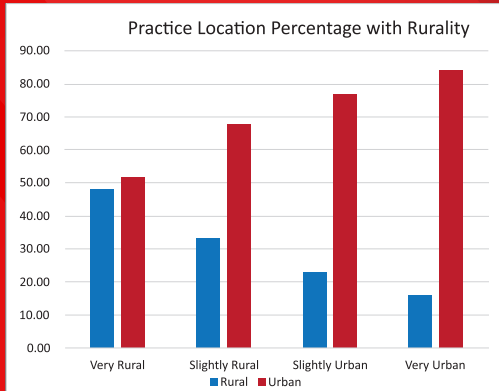


Fig. 1
Rural= Percentage students who answered YES to plan to practice in rural area
Urban=Percentage students who answered NO to plan to practice in rural area

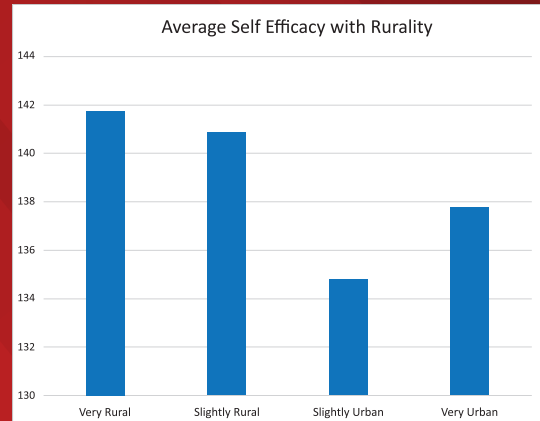


Fig. 2
Average Self-efficacy of students with rurality background.

Table 1. Characteristics of first year students in various healthcare professions in West Texas by rurality background 2022.

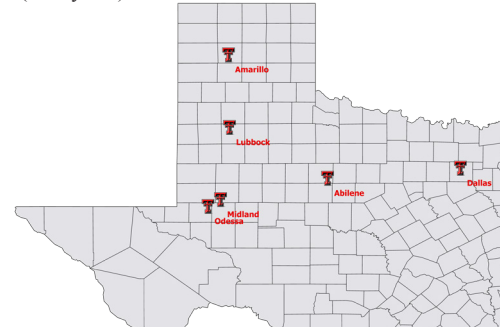
Variables	Very Rural (n=25)	Slightly Rural (n=24)	Slightly Urban (n=39)	Very Urban (n=25)
Age, years	25.60	27.79	26.23	26.76
Race %				
White	92.00	79.17	74.36	56.00
Black/African American	0.00	0.00	2.56	16.00
Asian	4.00	16.67	20.51	28.00
Others	4.00	4.17	2.56	0.00
Ethnicity %				
Hispanic	12.00	20.83	10.26	8.00
Non Hispanic	88.00	79.17	89.74	92.00
Gender %				
Male	32.00	62.50	33.33	20.00
Female	64.00	37.50	66.67	80.00
Non-Binary	0.00	0.00	0.00	4.00
Location %	22.12	21.24	34.51	22.12
Planned Practice Location %				
Rural	48.00	33.33	23.08	16.00
Urban	52.00	66.67	76.92	84.00
Personal Factor ² -(n=68)	n=19	n=16	n=24	n=9
Self-Efficacy	141.74	140.88	134.83	137.78
Behavioral Factor ² -Big5(n=63)	n=18	n=14	n=23	n=8
Neuroticism	3.22	5.50	4.09	3.50
Extraversion	4.94	2.64	4.65	6.63
Openness to experience	12.44	13.71	15.00	14.38
Agreeableness	8.89	10.21	8.09	9.13
Conscientiousness	8.56	9.57	8.05	8.25
Behavioral Factor ² -Outcome				
Expectation (n=62)	n=18	n=14	n=22	n=8
Academic	21.61	21.50	18.55	19.13
Career	18.33	17.29	17.23	19.63
Environmental Factors ² (n=55)	n=15	n=13	n=19	n=8
Teachers	28.00	28.08	26.05	26.38
Negative Social Events	-11.87	-11.23	-13.37	-9.13
Parents	26.87	26.62	25.63	26.13
High School Grades	9.53	7.92	8.05	8.38
Friends	6.27	5.92	6.63	7.88
Ethnic-Gender Expectation	5.80	4.23	6.68	5.751

Values are average for continuous variables and percentages for categorical variables

Results and Discussion

Surveys were administered and data was collected between September 1 and November 1, 2022. The preliminary analysis was done in 2023.

Study participants were from TTUHSC Abilene campus (12.39%), TTUHSC Amarillo campus (15.93%), TTUHSC Dallas campus (4.42%), TTUHSC Lubbock campus (62.83%), and TTUHSC Midland-Odessa campus (3.54%). These varied level of participation is reflective of total number of students in each campus. Participants are from SOM, SON, SOP, SHP, and GSBS. The average age of participants is (26.5 years).



Conclusion and Recommendation

Based on preliminary data, it appears certain personal, behavioral, and environmental factors influence the choice of a healthcare profession by students in West Texas. These same factors appears to have impact on the location of practice. Further studies with a larger sample size is necessary to be able to quantify and determine the impact of these factors.

References

- Eileen S. Health Care Shortage Designations: National Health Policy Forum. June 4, 2010. https://www.nhp.org/library/background-papers/BP75_HPSA-MUA_06-04-2010.pdf.
- MacQueen IT, Maggard-Gibbons M, Capra G, et al. Recruiting Rural Healthcare Providers Today: a systematic review of training program success and determinants of geographic choices. *J Gen Intern Med.* 2018;33(2): 191-199. doi:10.1007/s11606-017-4210-z.
- Oreshnick C. A. The Career Decision-Making Self-Efficacy Scale: "Revision and Further Application" (Master Thesis). Iowa State University.
- Gerlitz, Y., & Schupp, J. Assessment of Big Five personality characteristics in the SOEP. German Institute of Economic Research (Research Notes 4). 2005 Berlin: DIW.
- Betz, N. E., & Vuyten, K. K. Efficacy and outcome expectations influence career exploration and decidedness. *The Career Development Quarterly.* 1997;46, 179-189.
- Fisher, T. A., & Stafford, M. E. Reliability and validity of the Career Influence Inventory: A pilot study. *Journal of Career Assessment.* 1999;7(2), 187-202.

West Texas AHEC

Area Health Education Centers

The West Texas AHEC program supports six regional centers in Canyon, Plainview, Midland, Abilene, El Paso, and Wichita Falls. Goals for the West Texas AHEC program include the coordination of pipeline activities to recruit and engage with students to encourage them to enter the healthcare workforce.

Additionally, the West Texas AHEC Program expands community-based opportunities to increase health professions training capacity, provides community-based clinical training for health professions students through the AHEC Scholars Program, provides practice entry support, introduces youth to health careers through AHEC Jr. Scholars programs, and supports placement and retention of health professionals in high-need areas.

West Texas AHEC's accomplishments for FY 2022-23 include:

West Texas AHEC's Bridge to Excellence CHW Program provided **certification training for 16 new CHWs on the core CHW track.**

West Texas AHEC provided almost **400 hours of continuing education hours to 1,568 health care professionals.**

Student Rotations were facilitated for **183 health care professions students** in the West Texas AHEC region at the TTUHSC Free Clinic.



West Texas AHEC

In fiscal year 2022-2023, West Texas AHEC facilitated 183 students in clinical rotations, provided health career pipeline education to more than **60,000 students**, and supported **384 students** in the two Double T Health Service Corps.

AHEC Jr. Scholars

Since September 2018, West Texas AHEC's Jr. Scholar program has recruited rural high school students who want to pursue a career in health care, regardless of the field of study. Each year, each regional AHEC center is charged with enlisting new schools to participate in this program. To date, the centers have signed up a more than **5,000 active participants** from more than **30 rural schools**. This approach yields a greater impact due to the ability to provide resources such as shadowing opportunities, tours of the different health career programs, and a curriculum created for future health care professionals.

Continuing Education Programs and Health Careers

During the 2022-2023 fiscal year, **1,568 healthcare professionals** participated in more than **400 hours of Continuing Education Units (CEUs)**. The CHW Bridge to Excellence Program also offers intermediate-level CHW training and a certification course. This year, the Bridge to Excellence Program provided certification training for 16 new CHWs.



AHEC of the Plains



Big Country AHEC



Panhandle AHEC



North Central AHEC



Permian Basin AHEC



Desert Mountain AHEC

WEST TEXAS
AHEC

Rural Student Health Sciences Mentorship Program

The purpose of this new project is to start a mentorship program between medical students at TTUHSC Lubbock and high school students from rural areas interested in medicine, with extensive support from West Texas Area Health Education Center (AHEC) and various departments at the TTUHSC School of Medicine.

This coordinated effort is a great way for medical students to share their stories and paths to success for getting into college/ medical school, while also helping interested students realize their own potential for pursuing health careers and returning to their hometowns to practice and serve, helping many of our fledgling communities build their medical capacity.

In 2022-23, **40 TTUHSC medical students** and **57 high school students** from **17 rural high schools** participated in the program.



High School Telemedicine Certificate Curriculum

Powered by T-CORE

The High School Telemedicine Technical Certificate Curriculum is the first telemedicine certificate program tailored for high school students in rural West Texas. The curriculum offers competency-based training on telemedicine clinical procedures, technology, and business. The program provides students with the information and experience necessary to build and demonstrate their telemedicine competencies. Students who complete the curriculum and obtain a passing score from their instructor(s) will receive a technical certificate of completion from TTUHSC which shows they have demonstrated competency in telemedicine.

In FY 2022-2023, the curriculum for the High School Telemedicine Certificate program was revamped based on feedback from previous participants. The new and improved program, with upgraded lesson plans and other resources, was implemented in the Fall 2023.



DSHS Health Equity Grant

Community Conversations on Health

The T-CORE team is working on a project to better understand health disparities among rural communities in hopes of reducing the impact of future public health emergencies. The study is funded by the Texas Department of State Health Services.

As part of the project, the T-CORE team conducted community health needs assessments in the four participating counties. Some of the activities included:

- Participating in community events to provide health-related information.
- Conducting key informant surveys with leaders and stakeholders from different community sectors (healthcare, education, etc.).
- Conducting focus group meetings to get input from county residents/community members.
- Presenting findings from the community health needs assessment at a community meeting.

NEEDS ASSESSMENT | March-August 2023

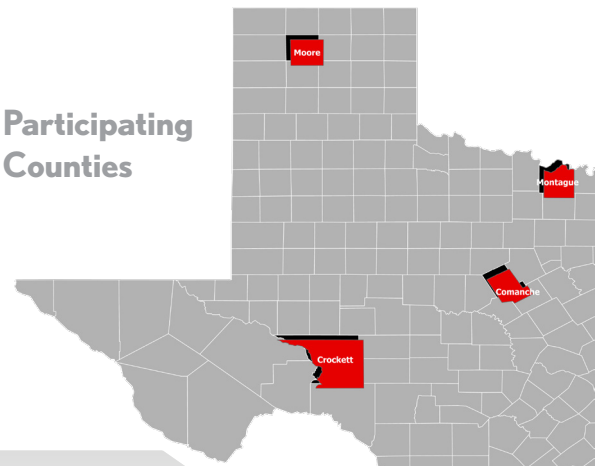
Assess Healthcare Challenges/Needs

- Data Collection
- Develop and Conduct Survey(s)
- Focus Groups

EVALUATION/REVIEW | September 2023-May 2024

- Analyze Community Assessment Data
- Determine Connections/Evaluate Needs
- Intervention Recommendations
- Regional Meeting (Share findings)
- Final Report to DSHS

Participating Counties



Rural Health Quarterly (RHQ)

Advisory Board

In FY23, the *Rural Health Quarterly* welcomed new advisory board members who are no strangers to dealing with the health issues facing Americans who live in rural areas. These include:

Adrian Billings, MD, PhD, who is an associate professor in the Department of Family and Community Medicine at Texas Tech University Health Sciences Center (TTUHSC)-Permian Basin. In addition to his scholarly duties, Dr. Billings sees patients in Alpine, Marfa, and Presidio every week.

Lamicha Hogan, APRN, MSN, FNP-BC is an assistant professor and Family Nurse Practitioner at TTUHSC. She also serves as Associate Dean in the School of Nursing at TTUHSC as well as the Department Chair for APRN Programs.

Amy Hord, LCSW is a behavioral health counselor at Family Support Services of Amarillo. Hord works to provide counseling services to adolescents and adults. Before this role, Hord worked as an Instructor of Social Work at West Texas A&M University in Canyon.

Courtney Queen, PhD is an assistant professor at TTUHSC's Julia Jones Matthews School of Population and Public Health in Abilene. In addition to her teaching role, Dr. Queen was selected as a Fulbright U.S. Scholar in 2020. Under this award, Dr. Queen traveled to Latvia in Eastern Europe to teach at Riga Stradinš University (RSU) as well as conduct research on health disparities and inequalities in Latvia's health care system.

RHQ
Rural Health Quarterly

Rural Health Quarterly (RHQ)

The *Rural Health Quarterly* is a scholarly publication that is administered, written, and published by the Institute. With articles covering rural communities, healthcare challenges, and rural health happenings around TTUHSC and West Texas, the RHQ is indexed on the Rural Health Information Hub and enjoys local as well as national prominence.



FALL 2022

Introducing the Julia Jones Matthews School of Population and Public Health • Public Health and Community Action • Addressing Complex Global Health Threats Locally

WINTER 2022

2021 U.S. Rural Health Report Card

SPRING 2023

Updated Health Conference Calendar • A Crash Course in Substantive Due Process: What the Supreme Court Decided in Roe, Casey, and Dobbs Rural Healthcare Access

SUMMER 2023

REH Designation: Safety Valve or Problem Child? • Updated Health Conference Calendar

Web and Information Technology Team (WIT)

Web and Information Technology (WIT) supports the Institute by developing interactive maps, designing layouts for publications, and providing technical assistance. WIT is also working to support the Institute's social media pages with new content and design.



MIGUEL CARRASCO, MS
Director of Web and Information
Technology



JESSICA ALEXANDER
Senior Designer



- F. Marie Hall Institute for Rural and Community Health
- Texas H.O.T. Jobs
- TexLa Telehealth Resource Center
- *Rural Health Quarterly*
- West Texas Area Health Education Center

JULY 9-15

Happening THIS WEEK

CROSSROADS CONFERENCE
2015 - NOVEMBER 14

Crossroads Conference Registration Now Open

Visit www.texlatrc.org for conference information and to register.

Project ECHO
THURSDAY, July 13
12-1pm CDT

Democratizing Treatment Access to Hepatitis C and Beyond with Dr. Sanjeev Arora

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER
F. Marie Hall Institute for Rural and Community Health

Thank you NURSES

NATIONAL NURSES WEEK MAY 06-12

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER
F. Marie Hall Institute for Rural and Community Health

Texas HOT JOBS
HEALTH OPPORTUNITIES IN TEXAS

www.texas-hotjobs.org



Grants, Applications, and Awards

The F. Marie Hall Institute for Rural and Community Health's (FMHIRCH) numerous strategic partnerships present a wide range of contractual needs. Over the course of fiscal year **2022-23**, FMHIRCH managed a total of **20 contracts** to support its numerous strategic partnerships.

The Institute also developed and maintained numerous internal partnerships with other departments throughout TTUHSC such as the School of Medicine, the Graduate School of Biomedical Sciences, the Julia Jones Matthews School of Population and Public Health, and the Department of Internal Medicine.

Through these strategic partnerships, the FMHIRCH expanded its mission to collaborate with the people of Texas for the advancement of health through innovative and scholarly research, the advanced use of technology, comprehensive education, and outreach.

Through its contract management and strategic partnerships, FMHIRCH embodies the Institutional vision of transforming health care through innovation and collaboration.

GRANT	START DATE	END DATE	TOTAL
Model State-Supported AHEC (HRSA)	September 1, 2022	August 31, 2023	\$ 865,500
Telehealth Resource Center Grant Program	September 1, 2021	August 31, 2023	\$ 650,000
Texas Department of Agriculture	May 1, 2023	September 15, 2023	\$ 39,353.50
Community Conversations on Health	November 10, 2021	May 31, 2023	\$ 818,986
Telehealth Broadband Pilot Program	June 1, 2022	December 31, 2023	\$ 650,000
TOTAL			\$3,023,839.50

Funding for FY 2022-2023

ENDOWMENTS

The Marie Hall Chair in Rural Health	\$ 219,684
Smith/Vela/Patterson Senior Fellowship for Rural Health Research	\$ 237,488
F. Marie Hall Institute for Rural and Community Health	\$2,116,023

STATE APPROPRIATED LINE ITEM FUNDING

Rural Health Care	\$ 673,058
West Texas AHEC Program	\$1,732,800

ALLOCATED FUNDING TO SUPPORT TELEMEDICINE SERVICES

Community Telemedicine Network	\$ 335,018
--------------------------------	------------

Offices/Boards/Committees

Billy Philips, PhD, MPH

TTUHSC School of Medicine (SOM) Admissions Committee
Institute for Telehealth and Digital Innovations Advisory Board
SOM Tenure and Promotion Committee
SPPH Tenure and Promotion Committee
President's Cabinet
Legislative Work Group
President's Advisory Board
Academic Council
SON Dean Search Committee
Member, Texas Health Improvement Network (THIN) Committee
Member, National Public Health Association
Member, Texas Public Health Association
Member, American Public Health Association
Member, American College of Epidemiology
Member, National Rural Health Association
Member, Association of Schools of Allied Health Professions

Wendy Bryan, MBA

Member, National Counsel of University Research Administrators (NCURA)
Certified Financial Research Administrator, Research Administrators Certification Council (RACC)
Certified Associate in Project Management, Project Management Institute

Cathy Hudson, MPH

Co-Chair of the Institutional Foundation Workgroup, Hispanic-Serving Institution (HSI) Committee, TTUHSC Executive Committee, Continuing Medical Education (CME), TTUHSC
Board of Directors, Secretary, Society of Clinical Research Associates (SOCRA)
Member, American Public Health Association (APHA)
Member, National AHEC Organization (NAO)
Member, National Rural Health Association (NRHA)

Jesse Jenkins, CHW

Member, National AHEC Organization

Rebeca Llanas, MSW, CHW

Member, Lubbock ISD Science Advisory Board

Sarah Looten, MPA

Member, TTUHSC External Relations Council
Member, TTUHSC Values 2.0 Taskforce
Member, 2023 TTUHSC Black History Month Planning Committee
Member, Legislative Work Group
Member, Society for Human Resources Management (SHRM)

Denise Lopez, MBA, MS

Member, Operations Task Force TTUHSC
Member, National Council for University Research Administrators (NCURA)
Member, One Team Fellows Cohort 2, TTUHSC
Member, Society for Human Resource Management (SHRM)

Kelly Munoz

Member, American Telemedicine Association (ATA)
Member, National Counsel of University Research Administrators (NCURA)
Member, Healthcare Information and Management Systems Society (HIMSS)
Member, National Consortium of Telehealth Resource Centers (NCTRC)
Member, Vision and Impact, National Consortium of Telehealth Resource Centers (NCTRC)
Member, Telehealth at the Crossroads Committee

Gbenga Olokede, MD, MPH

Committee on Research & Evaluation (CORE), National AHEC Organization (NAO)
Member, Texas Public Health Association
Member, America Evaluation Association
Member, Lubbock ISD Science Advisory Board

Dolores Parrish

Member, Society for Human Resources Management (SHRM)
Member, Latino/Hispanic Faculty & Staff Association (LHFA)

Frances Quintero

Member, Lubbock ISD Science Advisory Board
Member, Dallas-Fort Worth Community Health Workers Association

Derrick Ramsey, BBA, MEd

Board Member, Plainview Foundation for Rural Health
Member, Telehealth Taskforce TTUHSC Clinical Council
Member, American Telemedicine Association
Member, National Consortium of Telehealth Resource Centers. Healthcare Disparities Committee
Member, National Consortium of Telehealth Resource Centers, Marketing Committee

Laura Rauwald

Member, Disaster Day Planning Committee, TTUHSC

Max Richards

Member, ETS Subcommittee for LMS Systems

Lisa Wynn

Member, Society for Human Resources Management (SHRM)



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™

*F. Marie Hall Institute for
Rural and Community Health*



2022-2023 F. Marie Hall Institute for Rural and Community Health Staff

“

We focus our imagination, our talents and our energy to improve the health and well-being of the people and communities of Texas and beyond.

”



**TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™**

F. Marie Hall Institute *for*
Rural and Community Health

Contact Us



(806) 743-1338



ttuhsc.edu/rural-health/



ruralhealth@ttuhsc.edu



3601 4th Street MS 7110
Lubbock, Texas 79430

