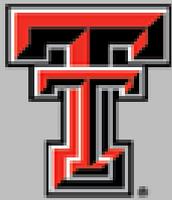


TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER™

“Meeting Rural Telehealth Needs”

Billy U. Philips, Jr., PhD, MPH
Executive Vice President for Rural and Community Health
Texas Tech University Health Sciences Center





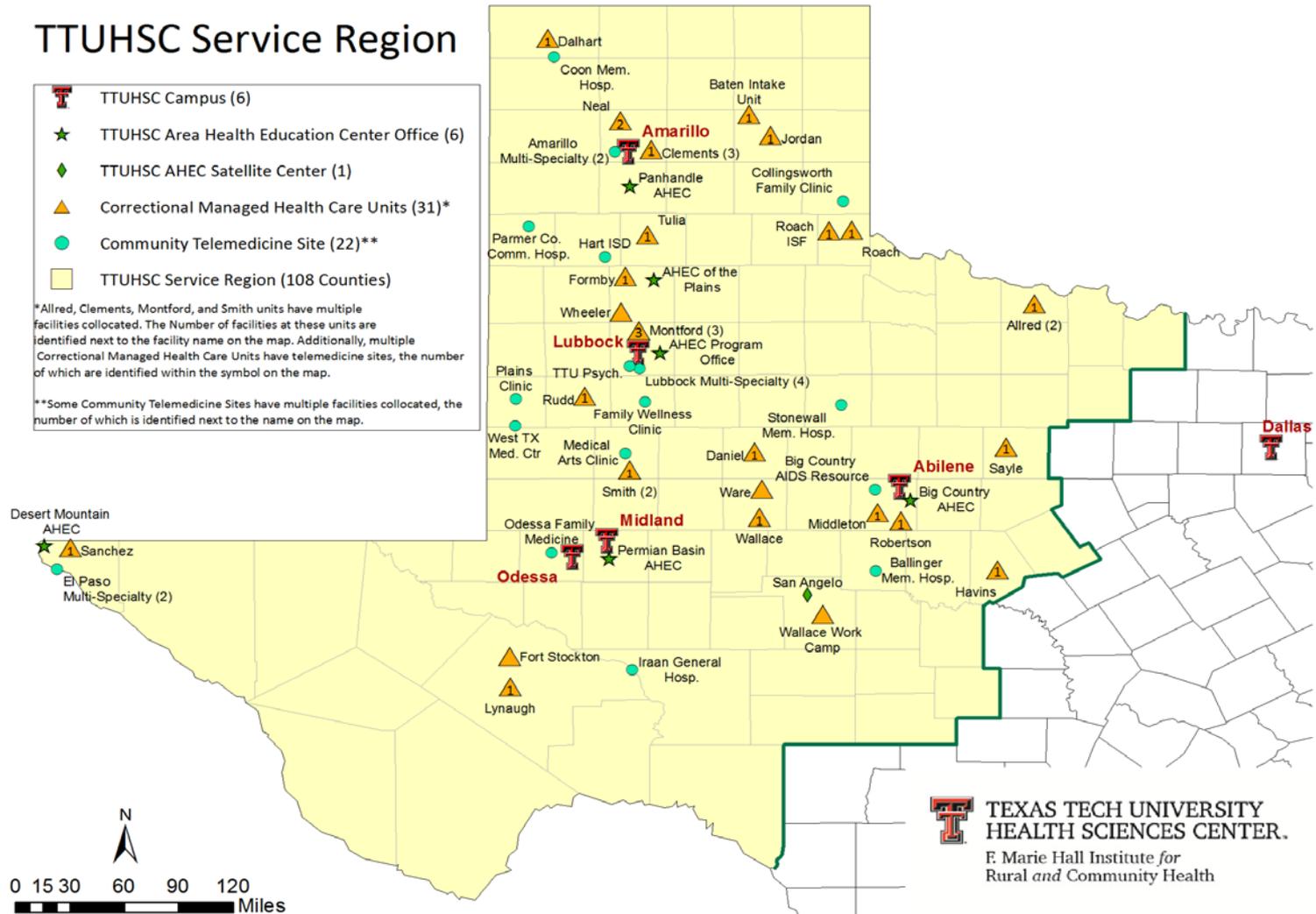
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TTUHSC Service Region

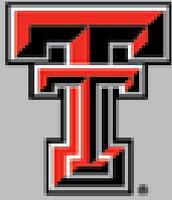
-  TTUHSC Campus (6)
-  TTUHSC Area Health Education Center Office (6)
-  TTUHSC AHEC Satellite Center (1)
-  Correctional Managed Health Care Units (31)*
-  Community Telemedicine Site (22)**
-  TTUHSC Service Region (108 Counties)

*Allred, Clements, Montford, and Smith units have multiple facilities collocated. The Number of facilities at these units are identified next to the facility name on the map. Additionally, multiple Correctional Managed Health Care Units have telemedicine sites, the number of which are identified within the symbol on the map.

**Some Community Telemedicine Sites have multiple facilities collocated, the number of which is identified next to the name on the map.

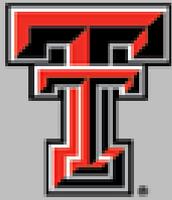


 **TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER.**
 F Marie Hall Institute for Rural and Community Health



Correctional Managed Health Care

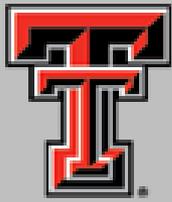
- 31 CMHC Sites in 108 counties
- 5353 telemedicine visits for FY 2016 (8 months)
- Subspecialties seen:
 - Dermatology
 - Urology
 - Internal Medicine
 - Psychiatry
 - Psychology



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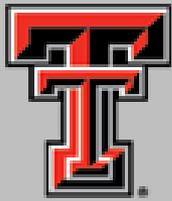
Telemedicine at TTUHSC

- Telemedicine began at the Texas Tech University Health Sciences Center in 1989. Telemedicine was originally designed to connect the four campuses of the Health Sciences Center of Lubbock, Amarillo, Odessa, and El Paso.
- Telemedicine eventually expanded for the purposes of connecting the main Lubbock campus to distant rural sites for the purpose of medical consultations. The first tele-consultation was conducted in 1990 between Alpine, TX and Lubbock.
- Between 1990 and 1993 TTUHSC developed “TeleDoc™”, a single portable integrated package that provides the opportunity for live interactive video consultations.
- Since 1990 more than 49,000 tele-consultations have been conducted at TTUHSC.
- Today, the TTUHSC Telemedicine Program continues to bridge the barriers in the 108-county service area of West Texas through new projects and innovations to expand telemedicine into our most rural areas.

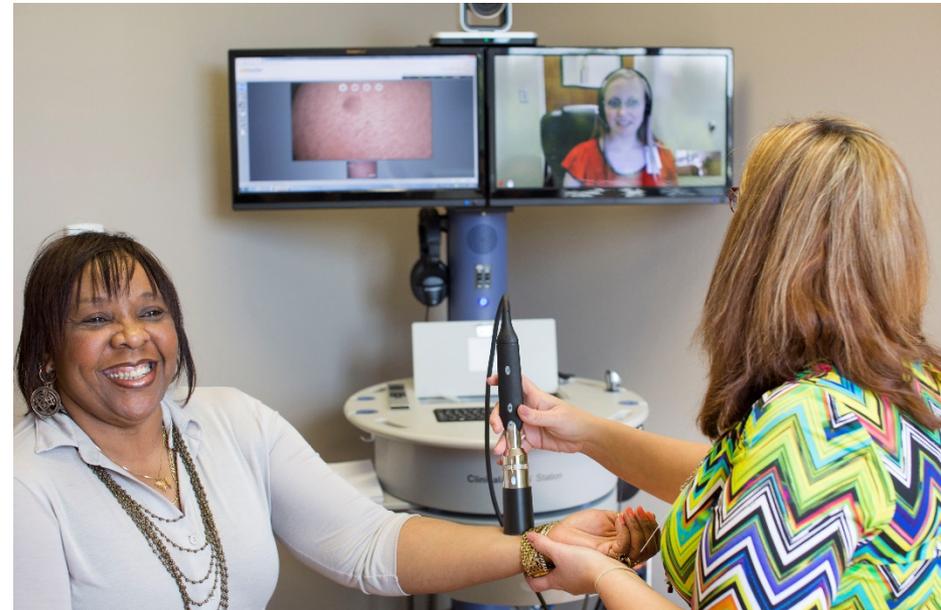


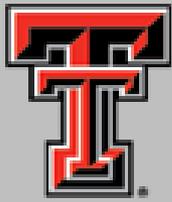
Frontiers in Telemedicine is:

- A training program that trains medical staff and clinicians specific to telemedicine that focuses on teaching clinical procedures, technology, business procedures, and the law.
- Focuses on competency-based learning and will begin to set the standard of telemedicine training across the country.
- A student must:
 - Complete an online course prior to classroom instruction;
 - Complete an objective structured clinical examination at the Frontiers in Telemedicine Lab in Lubbock, Texas.



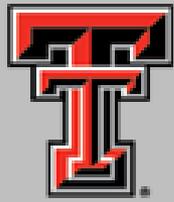
- This training program has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint providership of Advanced Health Education Center, Ltd. and TTUHSC Frontiers in Telemedicine. The Advanced Health Education Center is accredited by the ACCME to provide continuing medical education for physicians. The Advanced Health Education Center designates this live activity for a maximum of **18 AMA PRA Category 1 Credit(s)™**.





TexLa Telehealth Resource Center

- 1 of 15 telehealth resource centers in the nation.
- Federally-funded program designed to provide technical assistance and resources to new and existing telehealth programs throughout Texas and Louisiana.
- Assists in expansion of telehealth capacity and usage in Texas and Louisiana to improve health care access, quality, and outcomes.
- Provides education and guidance to health care organizations about telehealth planning, implementation, management, and sustainability, as well as educate policy makers about legislative and regulatory barriers to the use of telehealth.

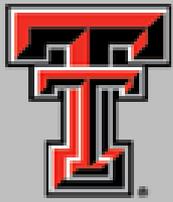


Telemedicine Wellness, Intervention, Triage and Referral Project

“The TWITR Project”

The primary purpose is to provide screening, assessment, and referral services to students who are judged to be immediate threats to do harm to themselves or others.

- Provides school-based screening, assessment, and referral services to students that are typically struggling with behavioral and mental health issues. Currently active in 10 West Texas ISDs.
- Uses Telemedicine technology to link remote rural schools that are without sufficient counselors, psychiatrists, and other mental health service providers.
- Provides mental health recognition and training services to educators and school resource officers to promote greater recognition and prompt referral.
- Outcome data has demonstrated a reduction in truancy (17%), reduction in student discipline referrals (25%), and increase in student overall GPA (3.6%).

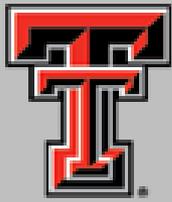


Aims of TWITR

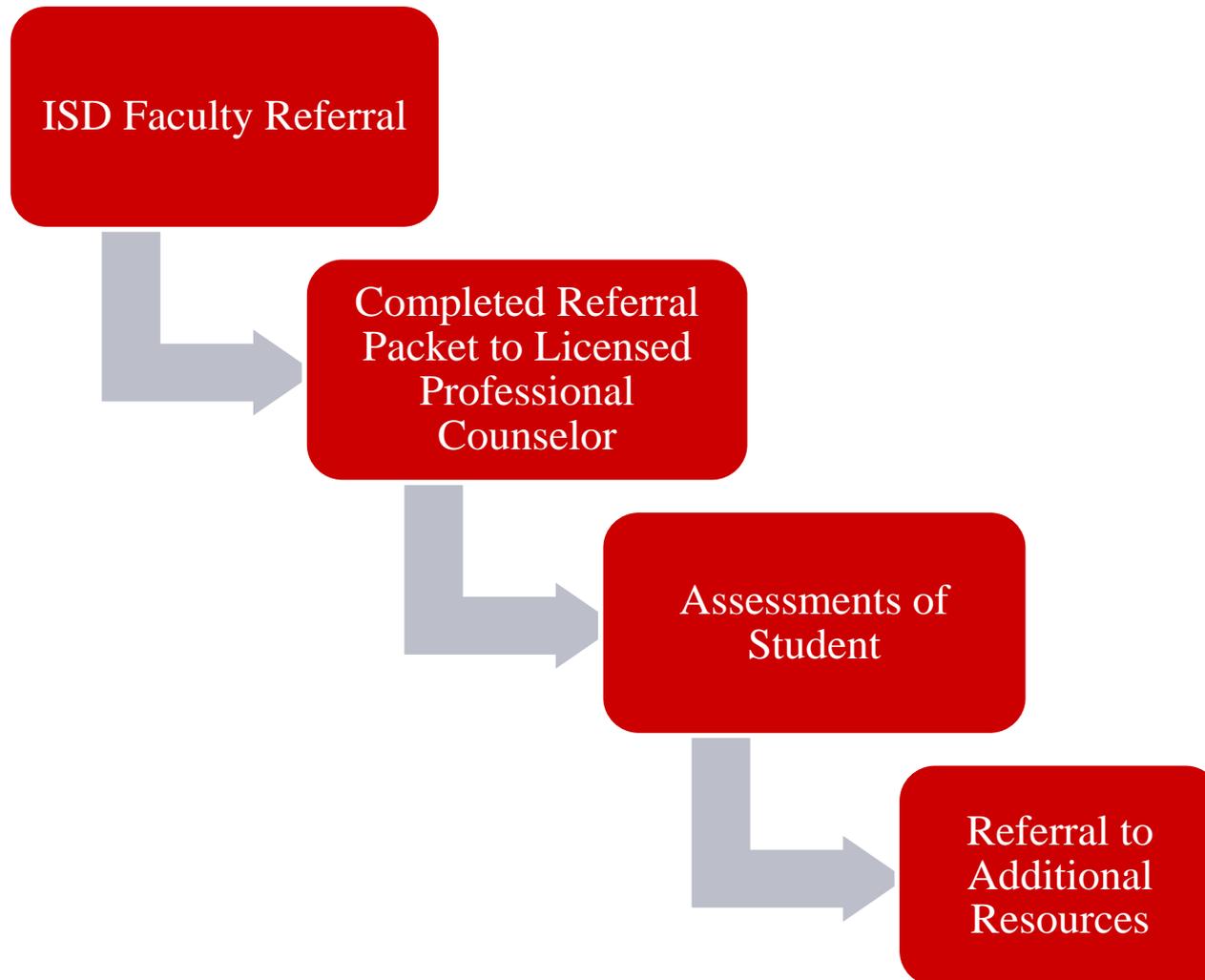
The primary purpose is to provide screening, assessment and referral services to students who are judged to be immediate threats to do harm to themselves or others.

The secondary objectives are three fold:

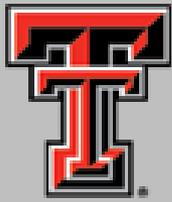
1. To demonstrate that school-based screening, assessment, and referral services can be provided to students that are typically struggling with behavioral and mental health issues.
2. To demonstrate that Telemedicine Technology can be used to link remote rural schools without sufficient counselors to Psychiatry and Mental Health Service Providers in an efficient manner.
3. To provide mental health recognition and training services to educators and school resource officers to promote greater recognition and prompt referral.



TWITR Referral Process

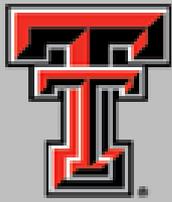


- Referral to Psychiatrist
- Referral to PCP
- Referral to Community Resources
- Referral to Other resources



The TWITR Process: Assessment

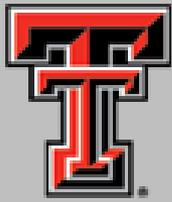
- TWITR Project staff will make contact with the referral school administration when they arrive at the school. The Telepsychiatry staff will follow the school districts procedures for signing in and out of the building.
- During this visit the TWITR Project staff can request student records [current grades, truancy reports, discipline referrals, and any other pertinent information] to assist in understanding the student's academic /social history and to monitor changes in student's behavior throughout the school year.
- TWITR Project staff will then complete the initial student evaluation, administer required TWITR Project assessments to the student, and other applicable parties [parent/guardian, teacher/counselor]. TWITR project staff will also obtain guardian/ parent signatures on required psychiatry forms.



TWITR Outcomes

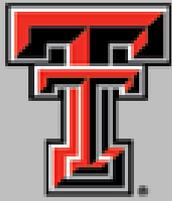
- Number of School Staff Trained = ~13,010
- Number of students impacted = ~32,139
- Number of referrals = 321
- Number screened = 130
- Number triaged = 118 (all by telemedicine)
- Number removed from school = 18
- Other outcomes = reduction in truancy (17%), reduction in student discipline referrals (25%), increase in student overall GPA (3.6%)





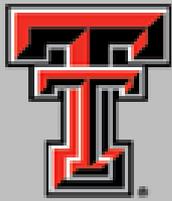
Why Telemedicine for TWITR?

- Provides easier access to mental health services not available in rural areas.
- Convenient for parents to make appointment(s) at school rather than traveling.
- Reduces the amount of time student(s) is(are) out of class.
- Often more comfortable for students to discuss issues online rather than face-to-face.
- Quick and easy set-up of equipment.
- Provides opportunity for simultaneous appointments.
- Provides attending physician the opportunity to provide services to more patients within a given amount of time.
- Cut the wait time from 6 weeks to 3 days (sooner in emergent events)



Abilene HIV+ Telemedicine Program

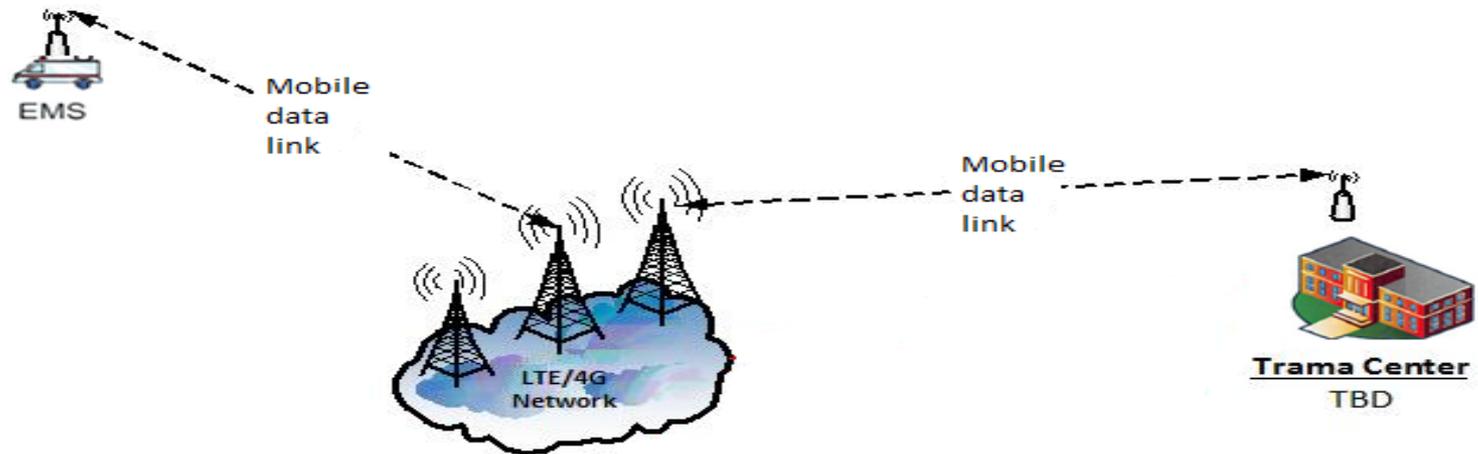
- Telemedicine clinic program with Big Country AIDS Resources (Ryan White Foundation-funded agency)
- Located in 19-county service area anchored by Abilene.
- No infectious disease physician accepting them.
- 140 known HIV+ uninsured patients.

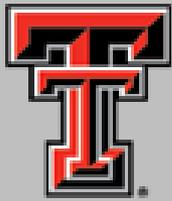


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Next Generation 9-1-1 Telemedicine Medical Services Pilot Project

Under House Bill 479 (84th Legislature), TTUHSC has been tasked with assisting the Texas Commission on State Emergency Communications (CSEC) to establish a pilot project to implement telemedicine technology in rural EMS and trauma facilities located in West Texas.





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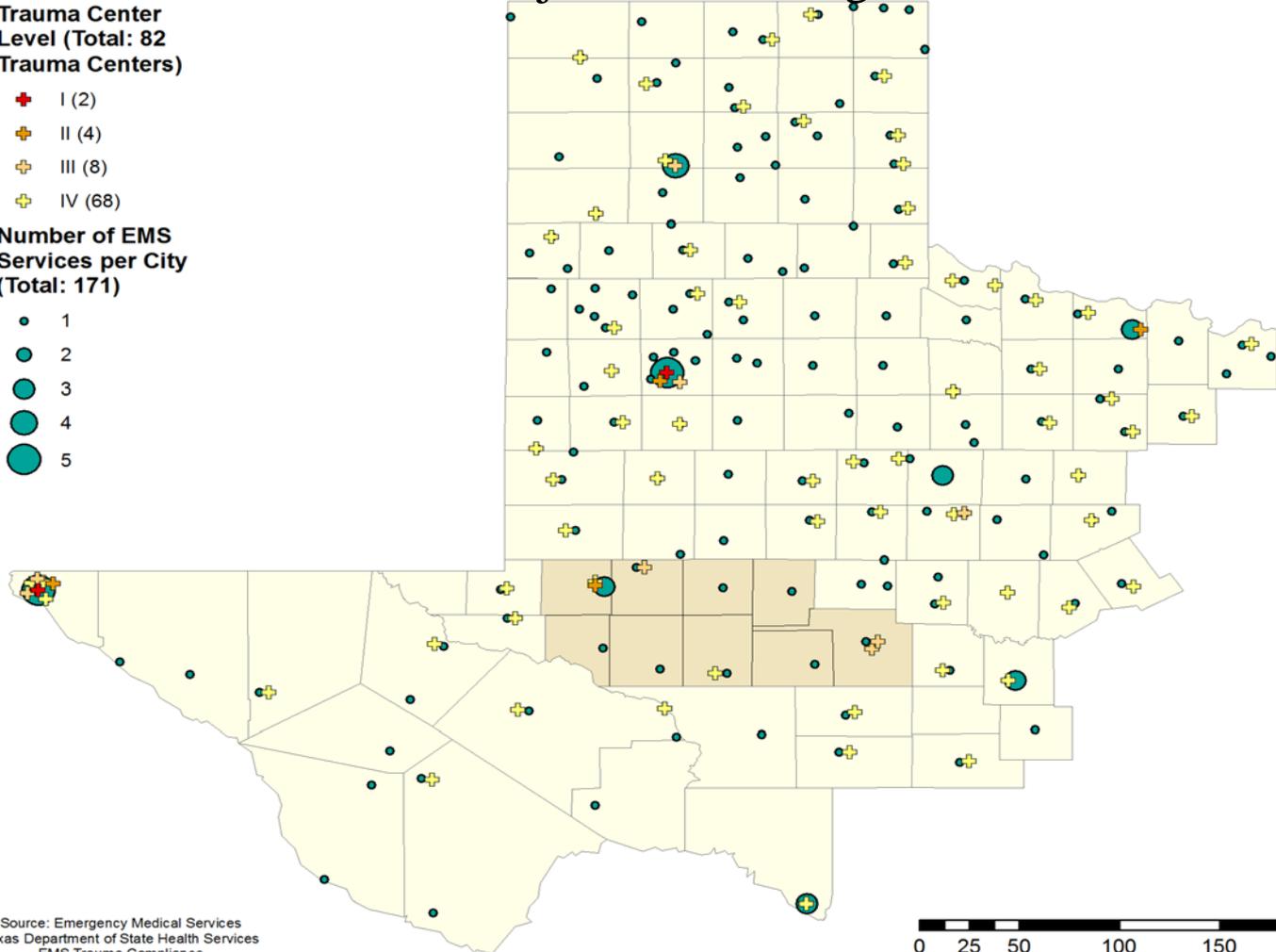
Next Generation 9-1-1 Telemedicine Medical Services Pilot Project Service Region

**Trauma Center
Level (Total: 82
Trauma Centers)**

- I (2)
- II (4)
- III (8)
- IV (68)

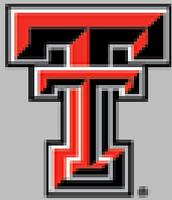
**Number of EMS
Services per City
(Total: 171)**

- 1
- 2
- 3
- 4
- 5



Source: Emergency Medical Services
Texas Department of State Health Services
EMS Trauma Compliance

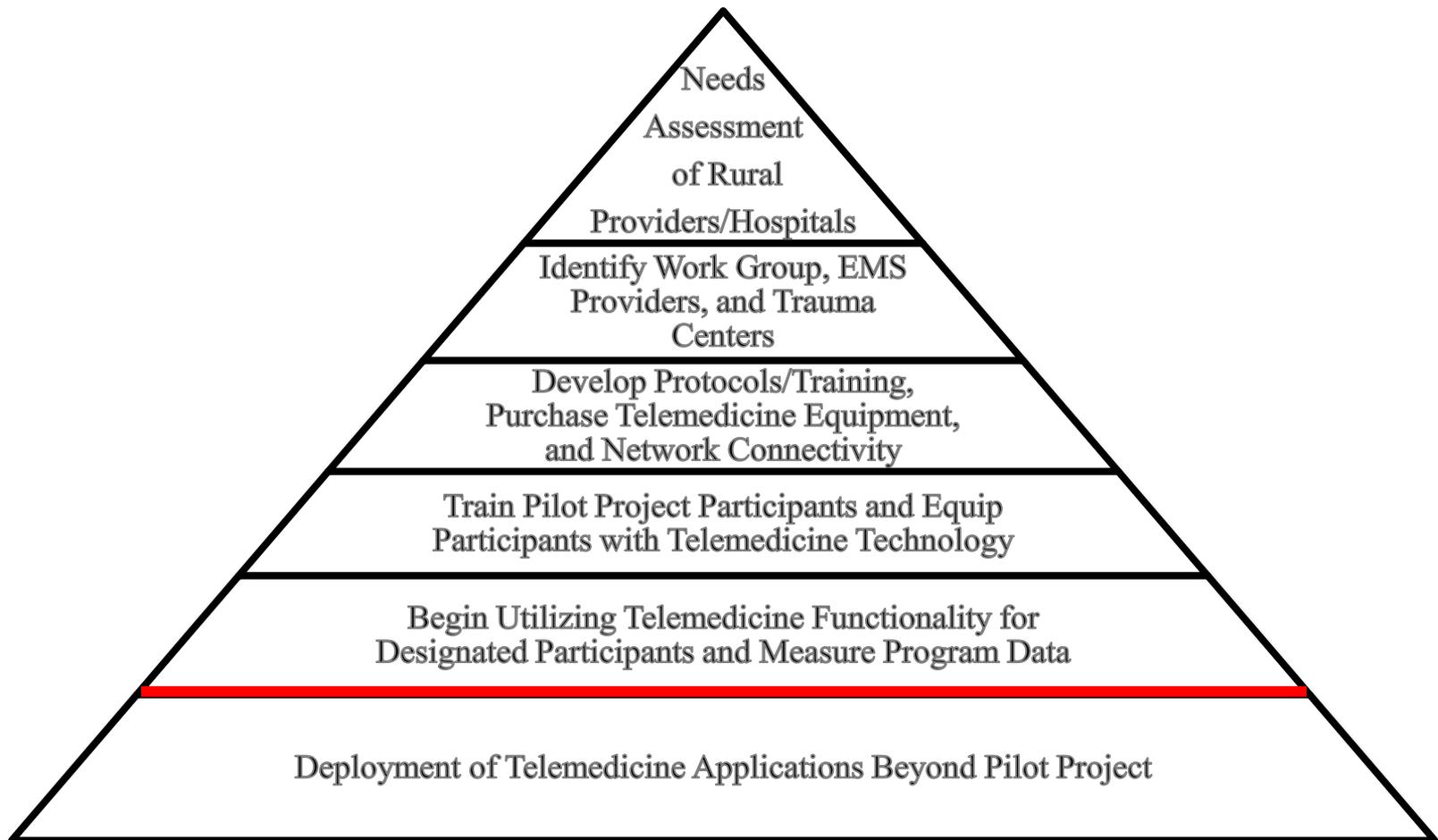
0 25 50 100 150 200 Miles

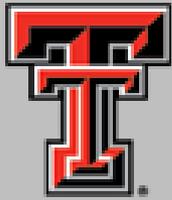


TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER™

Next Generation 9-1-1 Telemedicine Medical Services Pilot Project

Project Implementation





Mental Health and Telemedicine Innovations

- Amarillo and Odessa - June 2016 – new psychiatry training program with 4 PGY1 positions each (Telemedicine training as part of correctional managed health care and Vernon State Hospital or Big Spring State Hospital)
- 1115 Waiver (NP, fast track training in psychiatric nursing)
- PA Residency in Psychiatry (only 2 others in US – 1 year intensive)
- School of Nursing – New curriculum in psychiatric nursing with a telemedicine component