

BACKGROUND

Patients in rural areas have limited access to high-quality emergency care. Stroke neurologists, psychiatrists, and medical toxicologists are limited nationally, leaving rural areas disproportionately affected by shortages. TelEmergency (TE) was established to improve access to quality emergency care for patients in rural areas. Through TE, Advanced Practice Providers (APPs) in rural spoke hospital Emergency Departments (EDs) are connected to an Emergency Medicine board certified physician at the hub site, who directs care for patients in rural EDs (**Figure 1**).

OBJECTIVE

To improve access to specialist care in rural areas and limit unnecessary transfers through layering an acute consultation services into our mature TE system. Initial acute services will focus on tele-stroke, tele-psychiatry, tele-toxicology, which are especially limited resources in our state.

METHODS

We will conduct a feasibility study will utilize an existing, mature TE system and will layer acute consultation services off of this system.

- Specially trained APPs, at 19 rural and critical access hospital spoke sites (**Figure 1**), and the EM physician at the academic medical center hub will collaborate for usual emergency care of patients presenting to rural EDs.
- TE physician will determine if evaluation by a stroke neurologist, psychiatrist, or medical toxicologist is warranted.
- If deemed necessary, the tele-health visit with tele-stroke, tele-psychiatry, and tele-toxicology will proceed, creating an extension of the academic medical center hub site.

UMMC TelEmergency Program

Map of Participating Sites

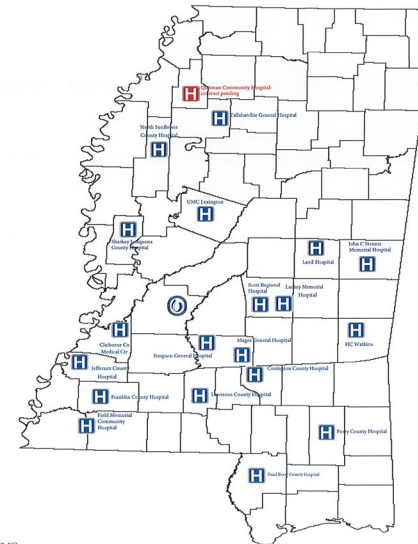


Figure 1. TE Sites

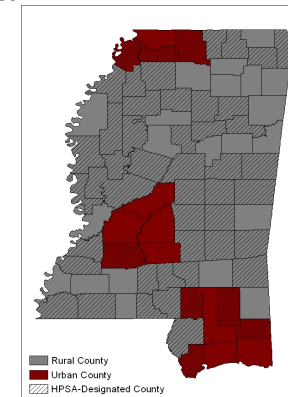


Figure 2. Rural vs Urban Counties

RESULTS

Currently, acute layering service consultations are being initiated. To date, efforts have focused on consistent communication across numerous departments, providers, and hospital systems to ensure adequate understanding and training for the new consultation processes. Given the time sensitivity of patients presenting with stroke-like symptoms, determining a thorough and reasonable stroke protocol for stroke activations at rural, spoke hospitals has been a critical component. Additionally, efforts are focused on determining an effective way to collect data across the many hospital systems and future goals of determining long term sustainability. The model will improve access to specialty care not available in rural areas, but also will limit unnecessary burden on the small numbers of stroke, mental health, and toxicology specialists in our state, who are primarily located in geographically isolated urban areas (**Figure 2**).

CONCLUSION

By using an innovative approach which capitalizes on a mature TE system, the acute layering consultation services model has the potential to expand the services available to patients in rural area, limiting unnecessary transfers and improving care. Additionally, this system has the potential to expand coverage from stroke neurologists, psychiatrists, and toxicologists, in a practical, feasible way in state where these services and consultants are limited.