

# Rural EMS Post-Hospital Closure Perceptions and Impact: Telemedicine Readiness

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## Introduction:

–In March of 2016, Tillman County’s Hospital, Memorial, closed its doors. One key aim of this research was to introduce alternative methods of health care delivery to the county by exploring willingness to implement portable telemedicine installments into rural county ambulance service programs.

## Objectives:

- Analyze paramedics perspective and comfort level of telemedicine, pre and post intervention.
- Install a functional telemedicine unit to virtually consult with OSU Medical Center Emergency Medicine physicians to assist in providing health care relief to rural Oklahoma.
- To examine the perceived impact emergency medicine telehealth interventions have on EMTs serving Tillman County, Oklahoma, a USDA persistently impoverished county post-hospital closure where the next nearest hospital is 31 miles away.
- Effectively train physicians and paramedics in tele-emergency technology and elicit transparent protocols between roles to create effective communication.



# Materials and Methods:

A researcher spent two months in Tillman County Oklahoma working with community stakeholders in healthcare and development. IRB protocols were established and followed.

The primary purpose was to conduct semi-structured interviews to gain perspective on the use of telemedicine among EMS in a rural and underserved county in Oklahoma. These interviews were recorded, transcribed, and coded.

The secondary purpose was observe daily proceedings among EMS crew members and themselves, patients, community stakeholders, and transporting hospital staff to learn how the community has adapted to hospital closure.



# Results and Discussion:

## Potential Policy Implications

### –Effective Patient Care

- Establishing methods to allow paramedics and EMT's transparent access to the success of their patient care in hopes of bettering their methods and treatments.
- Review and update paramedic and EMT scope of practice standards to reflect physician supervision via telemedicine

### –Efficiency of Broadband

- Analyzing broadband service in rural Oklahoma and how it can be improved to more effectively serve these areas with limited interruption.



# Results and Discussion:

EMS Personnel reflected a willingness to utilize telemedicine based on the perceived benefit.  
Perceived benefits includes:

- Confirmation and increased efficacy in delivering emergent first aid care.
- Providing consult and guidance in differentiating between moderate and emergent cases.
- Assisting with transporting patients to the appropriate level of hospital.
- Providing consult and education for patients that do or do not require transport.

EMS Personnel expressed perceived barriers that would need to be considered for appropriate implementation and utilization.

Perceived barriers includes:

- Need for “Hands on” training with the telemedicine system
  - =In Service training, within covered range, during non-emergent patient cases
- Bandwidth coverage for the device
- Protocol on telemedicine use
- Future direction of telemedicine use
  - =Potential cost to insurance and appropriate coding, billing, and reimbursement issues



# Conclusion and Acknowledgments:

## Conclusion:

More research is needed to determine the efficacy of telemedicine solutions in rural Southwest Oklahoma given broadband access disparities and adoption rates in the region. The EMS team expressed guarded optimism that virtual emergency telemedicine consults could provide benefit to the care they provide patients and local service delivery model. They also expressed a willingness to participate in a demonstration pilot for our state, university and medical school to learn from.

-Next steps:

OSU Center for Rural Health and OSU Medicine will be partnering with Tillman County EMS and AT&T FirstNet service to launch this pilot initiative in January 2021.

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