



NECP Spotlight:

Enhancing Rural Emergency Communications Capabilities



INTRODUCTION

Unlike major urban centers, rural areas face unique challenges associated with emergency medical response. For example, the delivery of rural medical care is often reliant upon the consistent communication between a combination of medical providers and non-medical emergency responders. Given the influx of rapidly changing technologies and policies impacting emergency communications, there is an increased need for established medical communications and trained personnel, especially in rural areas. Recognizing these challenges, the National Emergency Communications Plan (NECP) established goals and objectives to improve planning and coordination across the Emergency Communications Ecosystem. In alignment to the NECP, the Cybersecurity and Infrastructure Security Agency (CISA) established the Rural Emergency Medical Communications Demonstration Project (REMCDP) to help rural communities examine barriers and identify solutions that help improve the delivery of rural medical care. This spotlight will examine specific REMCDP accomplishments and illustrate the program's alignment to the NECP.

AN IN-DEPTH LOOK

First established in 2016, the REMCDP grant was awarded to the University of Mississippi Medical Center (UMMC). Through the First Hands Program, UMMC leveraged existing communications infrastructure to enhance operational efficiencies and provide communications training. For instance, this program helped improve Mississippi's statewide public safety communication system, Mississippi's Wireless Information Network (MSWIN), by extending its use to support rural medical care. This effort helped establish communications between non-medical first responders and medical crews, online medical support, and sophisticated medical infrastructure to greatly improve outcomes for the injured or ill in rural communities.



First Hands Program Components

- **Communications:** Public safety spectrum, radio frequency and channels, MSWIN system, Mississippi Wireless Communication Commission (WCC), agency interoperability
- **Medical:** Medical interoperability, disaster response coordination, trauma assessment (adult and pediatric), basic life support training, bleeding control tourniquet training
- **Evacuation:** Identifying criteria for air evacuation, air-to-ground communications, helicopter landing zone identification and requirements

The First Hands Program also extended medical services and communications across Mississippi's rural and sparsely populated communities. UMMC hired 19 instructors to teach programs and train additional instructors through a train-the-trainer approach to meet program demands. Between January 2017 and April 2019, UMMC hosted 293 classes for at least 5,400 participants. The courses included hands-on operational radio training, basic medical training, and evacuation guidance. As of April 30, 2019, at least 52 First Hands Program attendees had used the bleeding control kits and tourniquet training in response to an emergency situation; of those 52 incidents, eight were reported as life-saving efforts.

By effectively incorporating lessons learned throughout the demonstration project, UMMC evolved the First Hands training and improved its effectiveness, provided hands-on experience, distributed simple but crucial medical supplies, and ultimately, enabled non-medical emergency responders to save lives. Through this program, Congress funded a successful demonstration project that will continuously share lessons learned and best practices with other rural communities.





NECP ALIGNMENT

To help ensure effective coordination and availability of operable and interoperable public safety communications capabilities for incidents and planned events, it is important to understand the roles of rural emergency response. In support of this endeavor, the NECP emphasizes the need for improved planning and coordination across the Emergency Communications Ecosystem and across geographies, especially in rural areas. The following chart illustrates specific NECP recommendations and aligns them to actions accomplished by REMCDP.

NECP Goal	Objective	Objective Description	Real World Example
Goal 3: Training, Exercises, and Evaluation	3.1	Update and ensure the availability of training and exercise programs to address gaps in emergency communications	<p>UMMC hired 19 adjunct instructors to teach programs and a field support specialist to provide critical technical support. Support included instruction with portable MSWIN radios to allow for hands-on operational radio training and basic medical or bleeding control kits as both on-site materials for use during training sessions and tools that participants took with them to have available in moments of crisis.</p> <p>UMMC developed a database system to track First Hands Program statistics (e.g., number of participants by county), attendee details (e.g., history of medical training, radio background), performance metrics, and participants' feedback (i.e., pre- and post-course self evaluation).</p>
Goal 4: Communications Coordination	4.2	Enhance coordination and effective usage of public safety communications resources at all levels of government	UMMC launched a mobile smart phone application, entitled Mississippi Center for Emergency Services (MCES), to allow first responders to reference the First Hands communications and radio information while in the field. This included important phone numbers (e.g., Mississippi MED-COM, Mississippi Poison Control, WCC), MSWIN special event talkgroups, UMMC MCES talkgroups, and trauma assessment and first aid information.
Goal 5: Technology and Infrastructure	5.2	Ensure communications and information sharing systems meet public safety's mission-critical needs	UMMC designed an Automatic Vehicle Location (AVL) system tied to existing public safety radio infrastructure. The AVL allows for immediate location of assets and personnel while in the field, which is critical with the rural nature of Mississippi.

RESOURCES

Through REMCDP, the First Hands Program combined medical and land mobile radio communications education with hands-on exercises to empower first responders providing rural medical care. This program also helped address NECP implementation gaps and improve overall understanding of communications in rural communities.

For more information on the NECP, visit: cisa.gov/necp

For more information on REMCDP, visit: cisa.gov/remcdp or contact ECD@cisa.dhs.gov

For more information on the First Hands Program, visit: umc.edu/publicsafetysupport

Want to share your organization's successes and alignment to the NECP? Email us at: necp@cisa.dhs.gov