Dedicated Radio Channel Improves EMS Response



A 911 call is received at the Lincoln County 911 dispatch center from one of the county's 19 towns. A dispatcher uses a designated radio channel to send out the call to the ambulance service that covers that town and waits for a response.

The seconds go by. She intently listens for a response from that ambulance service, but nothing comes through. Finally, two minutes pass.

"We page them, we wait, and then we page. 'Did you copy?' If nobody answers, we page a second time and wait two more minutes, then we look at our protocols [for another ambulance service in the area], and we page there," Tara Doe, director of Lincoln County 911, described.

But Tara knows what this means for the person waiting for an ambulance. "Two minutes can feel like 15 minutes, and it can make a difference depending on the severity of the call."

Special thanks to the responders of Lincoln County's ambulance services:

- Boothbay Region Ambulance Service
- Central Lincoln County Ambulance
- Waldoboro Emergency Medical Service
- Wiscasset Ambulance Service

Lincoln County, Maine, has four ambulance services, and each has their own coverage area and their own radio channel associated with a small tower that works well in their own area but has limits. Dispatchers must rotate between these radio channels depending on the ambulance service provider. Additionally, each ambulance service works primarily on their own radio channel, so they may not be aware of their neighboring EMS provider's situation.

In contrast, there is one shared radio channel to communicate with the county's law enforcement and one for the fire departments, using a network of seven towers throughout the county, like cellular tower sites.

Due to several factors, the 911 dispatch center faced challenges that were highlighted during the COVID-19 pandemic, including workforce shortages, increased EMS response times, delayed inter-hospital ambulance transport, and inadequate mutual aid for other EMS agencies, or when one ambulance service is called to support and respond to a neighboring town or service area. It was the workforce shortages that every agency was experiencing that led to a solution.

Top photo: Lincoln County 911 Director Tara Doe demonstrates how calls are handled at the central dispatch center.

"So, the ambulance services, they came to us initially and we tried different recruiting ideas and paying for classes. Then, we thought about how to improve situational awareness," Tara recalled. "They all agreed because it didn't make sense that we were paging somebody to respond with mutual aid after so many minutes. We asked, 'What if we all went on one channel? It would also help with your reception issues."

Once all the ambulance services were on board, they wrote letters to the county advocating for the solution, and it was added to the budget. Around the same time, a grant opportunity surfaced. County Administrator Carrie Kipfer set to work applying for the federal funds dedicated to addressing gaps in the public health system that contributed to health inequities and disparities uncovered by the COVID-19 pandemic. The funds were available through the Maine Center for Disease Control and Prevention and the Midcoast Public Health Council.



Radio tower in Lincoln County.

With the support of these funds, Lincoln County 911 now has a new, shared channel in the radio network system dedicated exclusively to EMS radio traffic in Lincoln County. This will enable ambulance services to communicate more effectively with dispatch and one another, strengthening the communication capacity, decreasing response times, and allowing infectious disease information to be shared prior to unnecessary exposures.

"It will get the strength of all of them working together," said Tara. "There are so many times where there is only one ambulance available for an area, and, this way, they can work smarter and be wiser about it," she said.

The difference will be felt at the dispatch center, as well. "We go from monitoring four channels to just one," Tara said. In a job where every minute counts, Tara understands what this means for the community.

"Until you take that call from that person who is sitting at home, waiting for what feels like forever for somebody to get there, or you have an ambulance going somewhere in their area, but the weather is bad, and there is interference - there's nothing more frustrating than sending responders to a car accident or something, and we can't talk to them, and they can't talk to us.

"What if there's a safety issue? What if it has nothing to do with the call itself or the patient's care but with our first responders? Our primary goal every single day is to take care of our citizens, and make sure every responder goes home. And this will help us make sure that happens."

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- Learn about the Midcoast Public Health Council

