

# Emergency 911 technology struggles to keep up with the times

16 May 2018, by Lisa Marie Pane

High school students hiding from the gunman in Parkland, Florida, were forced to whisper in calls to 911 for fear of tipping off their location. Others texted friends and family who then relayed information to emergency dispatchers over the phone.

A few months later, a woman in Michigan was able to send off short text messages to 911 dispatchers as her homicidal husband held their daughter hostage. She was able to convey enough information to help officers get to the scene and formulate a plan to stop the man without the family being harmed.

The two cases show how that in this era of active shooters, police shootings and global terrorism, a patchwork of technology around the country can make the experience of calling 911 vastly different depending on where you live. More cities have begun to accept text messages recently, but the system that Americans rely on during their most vulnerable moments still hinges largely on landline telephones, exposing a weak link that jeopardizes the ability of law enforcement to respond in an emergency.

"Most of the technology that's in the nation's 911 centers today is technology of last century. It's voice-centric communications," said Brian Fontes, chief executive officer of the National Emergency Number Association.

Nearly 80 percent of the nation's 911 calls come from cellphones. Yet the dispatchers on the other end are hampered by outdated technology that in most cases doesn't allow them to accept text messages, receive a live-streaming video or sometimes even easily detect where the caller is. It's a striking contrast at a time when text messaging is ubiquitous, video chats with friends and family on the other side of the world are common, and Uber and Lyft drivers can pinpoint precise locations of riders.

The issue received new attention this week after the results of a police investigation in Cincinnati revealed numerous breakdowns in the response to a teenager who got trapped under the backseat of his minivan and died despite voice-dialing 911.

Experts worry that the nation isn't focused enough on improving the system and it is causing delays in getting emergency responders to the scene as fast as possible.

One obstacle is that there's no federal mandate or standards for call centers, with each one managed by state and local governments. That means there's a wide range of standards, equipment and training. And a recent report by the Federal Communications Commission found that a surcharge paid by phone customers that is supposed to be directed to 911 is diverted by some states to other needs, to the tune of about \$128 million.

It would cost considerably more than that to upgrade every call center in the United States. But David Turetsky, former chief of the public safety and homeland security bureau at the FCC, said there could be ways to reduce those costs by ensuring the system is more interconnected and working together, rather than separately.

"This underinvestment is a choice and it costs lives and health and the thing about the 911 system is that none of us should be too confident that it might not be our own life or that of a loved one or a friend," he said.

Rep. Anna Eshoo, a Democrat who represents California's Silicon Valley, has been on a mission to modernize call centers since seeing one up close during an earthquake when she was on the San Mateo County Board of Supervisors. Her worries only grew after the 9/11 attacks.

She's visited all the call centers in her district and,

she said, "the smaller ones, especially rural areas, you walk in and it looks like 1952 because they're not funded the way they should be. They need to be upgraded."

In December, she submitted legislation that would direct federal funds to state and local governments to allow them to upgrade their systems to "Next Generation 911."

It was Feb. 16, 1968, when the very first 911 call was placed—a test call made by a state senator in Alabama—and the system was born. It is now embedded in Americans at a young age to dial those three digits in an emergency. An estimated 270 million such calls are made each year in the United States.

Until recent years, dispatch centers might receive a handful of calls at most during an emergency. A witness to a car accident, for example, would have to get to a landline to alert authorities. And each landline phone is tied to a specific address, giving 911 operators instant access to their location.

But now in emergencies—whether it's a routine traffic accident or a fast-moving crisis like a mass shooting—911 operators get inundated with dozens of calls. If the person is using a cellphone to call from inside a building, the location may not be immediately known. And if they're inside a high-rise, it's even more of a guessing game.

"That call could be on the 90th floor, it could be on the 40th floor, it could be on the second floor," said Rick Myers, executive director of the Major Cities Chiefs Association. "That's pretty damned important information for the responding officers to know."

There are scores of stories offering warning signs about the system's lapses—from a man who died last year after getting lost just seven miles from Bethel, Alaska, after rescuers weren't able to find him because his cell signal wouldn't pinpoint his location. A woman in metro Atlanta several years ago used her cellphone to call 911 after her SUV plunged into water. The cell call went to nearest cell tower, which was in a neighboring county—and that county wasn't familiar with the address she

provided.

The biggest step many local governments have made with 911 is accepting text messages, including cities such as Phoenix, Arizona, but the vast majority still do not.

Melissa Alterio, the director of the 911 communications center in Roswell, Georgia, oversees a dispatch center that is among those accepting text messages.

Roswell, a suburb about 20 miles north of Atlanta, sees between 400 and 600 calls every day. It got its first text 911 message shortly after beginning to accept them this spring, someone worried about a possibly suicidal friend.

At some point soon, dispatchers might be able to view video streaming, just like anyone checking out Facebook. She worries about when that happens, knowing the emotional toll it could have on dispatchers who already struggle with what they hear on the other end of the line.

"We have to do something to prepare them for what they will see," she said. "God forbid a situation like a Parkland happens. It's tough enough that they hear it. Seeing it as it happens is just another stressor."

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