

Case Study: Albuquerque Ambulance

Effort to improve charting leads to resolution of chronic connection problems. It began as an initiative to more completely document patient care on the first pass. For Albuquerque Ambulance, that effort led to the Mobility XE mobile VPN from NetMotion Wireless. By resolving its longstanding connection issues, the organization was able to recover more hours for patient care, clearly diagnose other problems in the mobile environment and win the trust of employees. For patients, the consistent connectivity pays off in better-documented care, speedier ER response and in some cases, reduced door-to-balloon time for treating heart attacks.

About the Deployment

Albuquerque Ambulance is the sole provider of 911 emergency response for the Albuquerque area. Annually the organization handles more than 115,000 requests for service, of which 80,000 turn into transports to emergency. More than 200 EMTs staff a fleet of 55 trucks. Each vehicle is equipped with a Panasonic Toughbook model 30 or 31, running the Zoll suite of emergency response applications including billing and patient charting. These communicate via AirCards or embedded Gobi over the Verizon network, and via internal hotspots when the trucks are near hospital locations. But as Heath Wright, Operations Supervisor, explains, "We have a barrier due to the geography of Albuquerque. The Sandia Mountains run right through our service area. When we get up into the mountains we may not have coverage at all in those spaces. We could not go from one end of the town to the other without dropping cellular coverage." Wright and his team solved that underlying problem with Mobility XE.

An Initiative Stalled — and a Solution

As Wright relates, "We started a six-sigma project to increase the quality of our patient charting. But our employees told us loud and clear that first, we needed to fix our connection drops. With our Cisco VPN, they couldn't stay connected. When the cellular dropped, they were losing their connections, and having to re-enter everything. Many times, our employees were spending more time troubleshooting than charting. They just didn't have *time* to do a better chart. We couldn't move forward without fixing that. So we went on an all-hands-on-deck search for a solution.

"We tested Mobility XE with our supervisors. After the test, they found every excuse not to give it back, because it worked so well for them. Then we did a full-load test, and our crews loved it. Within a week it was crystal clear we weren't going to go back. We said we're going to do this right now, and pushed it through the company as hard as we could."

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Organization

Albuquerque Ambulance

Industry

Healthcare

Objectives

- Capture more correct patient documentation on first pass
- Eliminate time lost on troubleshooting
- Reduce door-to-balloon time for heart attack patients

Solution

- Mobility XE mobile VPN
- Panasonic Toughbooks
- Verizon cellular network
- Embedded Gobi chipsets or Sierra Wireless AirCards
- Zoll EMR suite

Results

- Successful six-sigma project
- 20-30 support calls per day eliminated
- 40-step troubleshooting process reduced to two
- 10-15 man-hours per day recovered
- Greater visibility and renewed confidence in IT

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20-30 Support Calls Daily Eliminated

Before installing Mobility XE, "If a crew thought their Toughbook wasn't going to work, they were coming back to base. Because of that, we were losing ten to fifteen unit-hours of productivity a day," declares Wright. "That's now down to one or two. We were fielding between 20 and 30 support calls every day just related to VPN connections, and that's a conservative number. That's down to almost nothing. We had this 40-step troubleshooting process that if this happens and your password fails, if you're at base you do this but if you're on your AirCard it works a second way. With Mobility XE we went from that 40-step process to 'OK, look at your little green thing, is it on?' Probably the hardest thing was to get our crews to stop messing with the settings, because they don't have to troubleshoot anymore. With Mobility XE, they just log in and go."

Greater Visibility Through Analytics

Wright relies on the Mobile Analytics package to tell him what's going on in the deployment at multiple levels. "When an individual's computer is having problems, we can see what it was doing, what network it's using, what applications it's running," he explains. "When we were having problems with multiple Toughbooks, we used analytics to discover that it was due to updates being pushed out, so we went to scheduling them when they aren't out on the street. And because analytics captures battery percentage, we were able to write an Excel program to calculate when the batteries are dropping too fast and need to be replaced. If you have somebody who likes to data mine, it gives them a lot of good data."

Better-Documented, Quicker Care

How do consistent connections benefit the medical mission? Wright states, "What is valuable for the patient is that we get the correct information the first time, document what their history is and the steps we've taken in order to pass that on to the physician, and put it in their medical record so they have good documentation of their healthcare. You're not going to get a good chart when you put a 20 or 30 minute problem to troubleshoot technology on our crews. That's not value-added work for the patient. And Mobility XE helps us with another initiative. We transmit our 12-lead EKGs to the hospital so the physicians can interpret them in real time. We can tie in with the cardiologists, spin up the cath lab, get patients to definitive care much quicker, and cut our door-to-balloon time."

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Regaining Employee Trust in IT

"What became very clear is our biggest win in our six-sigma project was bringing in Mobility XE," enthuses Wright. "It removed the biggest barrier we had for understanding our IT infrastructure problems and what was going on. The old VPN was so inconsistent you couldn't see anything else. By removing that variable and giving us very consistent connectivity, Mobility XE allowed us to see other problems which had been blamed on our old VPN, and remove even more barriers for our crews. It allowed us to regain the trust of our employees on IT issues."

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