

# Case Study

Industry: Healthcare

## University Medical Center of Southern Nevada (UMCSN)

Project: Enterprise-grade WLAN to the bedside



### The background.

The University Medical Center of Southern Nevada (UMCSN) in Las Vegas is the state-designated Level I Trauma Center for Southern Nevada and the only freestanding trauma center west of the Mississippi. It is the 18th largest public hospital in the country. UMCSN maintains educational partnerships with the University of Nevada School of Medicine, Touro Medical School, and the College of Southern Nevada.

For a facility the size of UMCSN—the largest hospital in Nevada—providing comprehensive wireless coverage was no small feat. The facility has a service area that covers 10,000 square miles. The main campus comprises 850,000 square feet in eight different buildings that house 544 hospital beds. UMCSN has 4,000 employees and more than 1,500 physicians.

### Implementing mobile patient care.

UMCSN wanted to implement a CareFusion system for mobile lab orders and point-of-care patient and specimen correlation and collection. “The solution had enormous potential in terms of patient safety and staff efficiency, but would provide little value if it wasn’t 100 percent reliable—24/7—across the facility,” said M. J. Ernie McKinley, CIO UMCSN.

The mission-critical solution required an enterprise-grade wireless network—something UMCSN didn’t have. That’s when UMCSN turned to Black Box to help them implement an innovative wireless strategy for this system and to pave the way for a new vision of mobile patient care.

### Providing wireless coverage across 850,000 sq. ft.

UMCSN required a particularly robust WLAN solution. “We made a strategic decision to replace our conventional WLAN system and to deliver wireless utilizing a distributed antenna system (DAS) and WLAN solutions from Black Box,” explained Mr. McKinley.

Black Box provided voice- and location-grade wireless coverage that was designed to deliver seamless, uninterrupted wireless across all of UMCSN’s facilities—with ubiquitous coverage and signal strength. “From day one, our experience has been that the solution met or exceeded the minimum signal strength quoted to us by Black Box,” said Mr. McKinley. “Unlike our previous WLAN, we also didn’t experience any signal loss or channel overlap issues,” he continued.

The real test came with CareFusion’s certification of the network, which concluded that UMCSN had achieved the best wireless coverage and most consistent signal strength of any hospital they had certified.

### Spending less IT time troubleshooting wireless.

From an IT perspective, the Black Box solution has driven new levels of wireless reliability, resulting in a dramatic drop in wireless-related help desk calls. A typical hospital might encounter as many as 30 calls per month due to wireless connectivity issues. However, in its first year of operation, UMCSN received only one help desk call about wireless connectivity issues.

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*M. J. Ernie McKinley, CIO, University Medical Center of Southern Nevada (UMCSN)*



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# UMCSN Case Study (continued)

UMCSN also greatly reduced IT costs. “We realized a significant reduction in the number of hours spent on wireless infrastructure maintenance—roughly 70 percent fewer hours,” explained Mr. McKinley. “Time savings like these are substantial for healthcare organizations and give scarce, valuable IT resources the freedom to investigate new solutions and opportunities.”

## Ensuring a consistent user experience—while reducing costs.

Since implementation, UMCSN’s use of wireless networking has seen tremendous growth and the organization has adopted many more wireless applications. The DAS and WLAN solution provides a blanket of RF coverage that UMCSN can use for virtually any

wireless service, from 802.11 Wi-Fi to 3G/4G, WMTS, and more as they implement additional wireless applications.

## Performance—and partnerships—that we can build on.

“We have confidence that comes from working with wireless technology professionals like Black Box whose RF-knowledgeable team not only equipped us with cutting-edge solutions and provided valuable project management services, but treated us like partners through the entire implementation process,” commented Mr. McKinley.

*“The level of wireless performance of Wi-Fi enabled by Black Box Network Services has tremendous implications for an organization like UMCSN, enabling us to explore any number of wireless point-of-care opportunities that otherwise would have been beyond our reach.”*

*M. J. Ernie McKinley, CIO, University Medical Center of Southern Nevada (UMCSN)*

