7SIGNAL®

THE WI-FI PERFORMANCE COMPANY

Canton Mercy Medical Center
Meets ever-increasing demands for reliable mobile device connectivity

MERCY
MEDICAL CENTER

Mercy Medical Center, is a 476-bed hospital within the Sisters of Charity Health System. It has provided quality, affordable healthcare for over 100 years, and is rated among the top 50 best cardiology hospitals in the US.

Challenge

Hospital buildings are notoriously hostile environments for wireless connectivity. Canton Mercy Medical Center had been a long-time user of Wi-Fi since its first deployment in 2005. Now the wireless network has become mission-critical. It is used for clinical access, administrative access, voice communications, and supports a broad array of biomedical devices, data capture equipment and supporting applications.

More mobile devices and wireless-enabled equipment from different manufacturers are being brought into the environment, and they each have unique connectivity challenges. In addition, voice call quality was inadequate, and doctors and staff complained of poor performance when accessing clinical applications and data from their mobile devices.

Solution

"The bottom line is that wireless is not a nicety anymore — it's a requirement," said Paul Jones, CTO, Sisters of Charity Health System. "And it's not enough just to have wireless available. The performance has to be good." Canton Mercy Medical Center deployed 7SIGNAL's Sapphire Eye to obtain the real-time performance data needed to isolate and troubleshoot persistent Wi-Fi connectivity issues.

Sapphire Eye sensors were installed on the 10th floor of the main hospital, where the Emergency Department, Radiology, Operating Room and other critical functions are located. Additional Sapphire Eye units were deployed at the Mercy Health Center STATCARE facility in Massillon, Ohio.

Canton Mercy Medical Center

Location: Canton, Ohio, USA

Hospital Beds: 476

Critical Apps: Voice, Biomedical devices, Clinical access

Benefits Realized from the Sapphire Wi-Fi Performance Management System

- Eliminated numerous persistent Wi-Fi performance problems

- Enables IT to identify device-related issues and inform manufacturers

- More reliable voice services and improved Wi-Fi reliability for all users

- Increased clinician productivity, reduced risk and improved patient care

Results

Based upon initial data generated by 7SIGNAL, Canton Mercy Medical Center upgraded a wireless LAN controller and saw immediate improvements in throughput. In phase two, 7SIGNAL data identified an additional controller requiring upgrade, traffic bottlenecks in the 2.4GHz band and recommended a variety of configuration changes throughout the environment. After these changes were made, the hospital saw significant improvements in voice call quality, throughput, packet loss, bandwidth utilization and other key metrics.

Proactive Performance Management

Given the dynamic nature of the Wi-Fi environment, Mercy Medical Center continues to rely upon 7SIGNAL to ensure performance and quality of service. After performing remediation and getting the overall network performing above baseline targets, the hospital established thresholds within the Sapphire Eye. The system provides a graphical "dashboard" view of data so that IT staff can see at a glance if SLAs are being met. If metrics drop below threshold, the system sends an alert.

"Before, we would have to wait until a lot of people complained and then do a lot of research to find the issue. Now, we are able to be more proactive about it." Triplett said. "This has not only enabled us to resolve problems more quickly but it has also reduced the number of calls to our help desk related to wireless connectivity."

The 7SIGNAL also stores historical data and presents graphs that show trends over time. If there are any changes to the wireless environment, they are noted on the graphs so IT staff can see whether the impact of the change was positive or negative.

"When users experience poor performance, the first thing they blame is the wireless network because they can't see it," said Jones. "This is a great tool to eliminate that perception and help us focus on what the problem really might be. More importantly, it enables us to provide a wireless solution that is 100 percent available, helping to increase productivity, reduce risk and improve patient care."

> "*It's not enough just to have wireless available. The performance has to be good.*"
>
> Paul Jones, CTO,
> Sisters of Charity
> Health System

> "*You see what the issue is without hours of research. I can't tell you how much it helps us.*"
>
> Shawn Triplett,
> Manager of
> Infrastructure Services

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