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CHALLENGE

Huggins Hospital in Wolfeboro, NH is a non-profit community hospital that offers the warmth and friendliness of a small town with the technical expertise of modern medicine. Huggins provides medical services to the region's year round population of 30,000 and the approximately 120,000 seasonal visitors who come from all over the world to enjoy the area's lakes and mountains.

The Leadership Team at Huggins recognized that access to wireless communication service was becoming critical for patients, their families, and hospital staff. However, many areas of the hospital did not receive good cellular reception due to masonry construction and locations below ground. Huggins IT staff was charged with determining exactly where coverage could be improved and developing a plan and budget for improved coverage.

SITUATION

Huggins understood that it needed to implement a solution that would support all available Wireless Service Providers (WSP) as it could not control the wireless service used by patients, visitors and staff. In addition, Huggins wanted a solution that would cover designated areas, including the recovery waiting rooms and café in the hospital without interfering with the areas of the hospital where the outside signal did penetrate the building and provide good coverage. The IT staff at Huggins realized important information would have to be collected about existing coverage in order to produce a meaningful system design and accurate budget for the project.

SOLUTION

Green Mountain Communications was brought in to conduct a wireless survey of the building exterior, and interior and use that information to produce a system design and budget for a Distributed Antenna System (DAS) capable of eliminating the dead zones while offering room for future growth. The Green Mountain Wireless Feasibility Assessment pinpointed which WSP frequencies were present and at what signal levels. Green Mountain also communicated with the WSP RF engineers to determine what

they would require for the hospital to be allowed to re-broadcast the FCC licensed frequencies. The report that resulted from this assessment allowed the hospital to understand their options and costs for implementing a solution. Based on the recommendations, the hospital was able to "pick and choose" what areas to cover thus holding the project costs at a level the hospital could afford.

RESULT

Green Mountain Communications implemented a DAS using an antenna/ repeater that captures WSP signal from nearby cell towers and re-broadcasts that signal into the appropriate areas of the hospital. Because Green Mountain communicated the test results discovered during the initial survey with the WSP and shared the system design with the WSP RF engineers, Huggins has the piece-of-mind knowing the system they implemented is FCC approved and meets with WSP approval. The system provides pervasive 3G and 4G service for multiple carriers scalable for the future.

LONG-TERM BENEFITS

As a result of the new DAS, AT&T and Verizon patients, staff and anyone visiting the hospital will enjoy the same level of service inside the building for cell coverage as they do on the outside. Doctors can communicate more easily with their offices and clinics, saving valuable time providing care. Patients and their families can communicate with the outside world more easily, enhancing their experience at the hospital.

"Given that NHSafeNet is one of the first projects of its kind for a state in the U.S., we are very pleased with the planning, execution, and results of this complex microwave network project... The ultimate goal of this project was to increase bandwidth and functionality across multiple public institutions throughout the state, thereby increasing connectivity, collaboration, and ease of access. Green Mountain was a pleasure to work with and we are thrilled with the successful outcome."

Brian Shepperd, program director for NNHN and project manager for NHSafeNet