Allina Hospitals & Clinics
Clear the Airwaves with TE DAS

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- Dwight Heairet, Network Specialist Lead for Allina

Allina Hospitals & Clinics is a not-for-profit family of hospitals, clinics and other care services dedicated to meeting the lifelong health care needs of communities throughout Minnesota and western Wisconsin. Headquartered in Minneapolis, Allina operates 11 hospitals, 58 clinics, 15 pharmacies, and more than 40 other clinics and specialty care centers throughout the area.

As the smartphone revolution swept through Allina’s hospitals over the past few years, users began to notice that wireless coverage wasn’t universally available inside the facilities. In 2009, Allina’s IT department began a comprehensive program to improve wireless service inside the company’s hospitals and headquarters building, and thanks to TE’s InterReach Fusion distributed antenna systems (DAS), Allina is now on its way toward seamless, high-performance mobile reliability.
COVERAGE ISSUES

Communications services are vital in health care, and being able to reach someone in an emergency can make the difference between life and death. With doctors and interns becoming glued to their BlackBerry and iPhone devices, Allina needed to implement a better wireless coverage and capacity infrastructure.

The effort began in 2009 in Allina’s headquarters building, and then quickly expanded to Abbott Northwestern Hospital in Minneapolis. Ranked among the top 50 hospitals in the nation, Abbott Northwestern serves approximately 200,000 patients and their families from the Twin Cities area and the upper Midwest.

“The doctors want to get off of pagers,” said Dwight Heairet, network specialist lead for Allina. “Some of them were carrying three or four pagers, and they wanted to consolidate everything onto a smartphone.” In addition, along with voice, e-mail and calendaring, doctors had begun to use home-brewed applications for patient care rounds, checking drug interactions, and other tasks, so they were also increasingly using broadband data services.

The biggest issue for coverage was in the hospital’s basement, where operating rooms, the doctors’ lounge, and intern offices are located. “These guys live and breathe with their cell phones, and we had a big dead spot down in the basement where coverage was impossible,” says Heairet.

To address the issue, Allina’s IT team evaluated in-building cellular systems from three different vendors, but TE won out. “TE looked to be the most scalable and cost-effective solution,” says Heairet, “and we knew that we would be expanding the system beyond the basement over time.”

Another issue was the hospital’s need to support all four major service providers in the United States, since doctors and employees bring their own devices to work. Among the systems evaluated, only TE’s InterReach Fusion could support all four carriers with a single set of equipment and deliver uniform signal strength to every remote antenna location.

TE’s InterReach Fusion system architecture delivers the same signal strength to each remote antenna, no matter how far any antenna is from the nearest electronic hub. Other solution’s signals lose power as they travel along copper and fiber cabling. Those electric and optical losses translate to RF power loss at the antenna unit.
SIMPLIFIED DEPLOYMENT

Allina’s IT team worked directly with TE sales engineers to design and install the system. After TE did an initial design and trained Allina’s technicians on installation procedures, the Allina team completed the deployment.

So far, systems have been deployed at Abbott Northwestern Hospital as well as in the Allina headquarters building. To bring the cellular signal to the system from outside the building, Allina installed donor antennas on the rooftops at Abbott Northwestern Hospital and its company headquarters pointed to nearby cell towers.

“The systems are very user-friendly,” says Heairet. “They’re easy to set-up and troubleshoot, but basically you just turn them on and they work. We can now use our mobile phones at headquarters anywhere from the basement to the ninth floor.”

“Essentially, we’re working from the basement up in terms of expanding the DAS at Abbott Northwestern,” says Heairet. “And now that we have a reliable wireless system, the other hospitals are asking for it too.”

Already, plans are underway to deploy a system in United Hospital in St. Paul, and the IT department has asked for budget for additional deployments after that.

“As long as we can find the money, we’ll be deploying these systems in all of our hospitals and clinics,” said Heairet.

With easy deployment and easy scalability, TE DAS solutions are providing a build-as-you-grow wireless network solution for Allina Hospitals & Clinics that will enhance medical care throughout its facilities.

CHALLENGES

• Address poor wireless service inside hospitals and headquarters buildings
• Provide ample capacity for increasing wireless broadband data usage
• Enable support for four service providers
• Ensure scalability to expand systems

SOLUTIONS

• High-performance in-building wireless system delivers consistent coverage and capacity throughout buildings
• One system supports services for four service providers
• Easy deployment and expansion accomplished by IT staff, saving cost and time