The Nebraska Medical Center improves patient safety while cutting costs with Milestone IP Video

When The Nebraska Medical Center wanted to streamline its operation and improve the care of at-risk patients, Milestone XProtect® video management software proved to be the answer.

"What's really important to the customer about XProtect is the simplicity of its user interface and its reliability."—Phil Fenton, manager at Sentrixx Security

**The challenge:** The Nebraska Medical Center is the largest health-care facility in the state, with 624 licensed beds. With a number of patients who require 24/7 observation, the medical center wanted to improve the safety of these at-risk patients, while also reducing staff and overhead requirements.

**The solution:** The Nebraska Medical Center partnered with authorized Milestone partner Sentrixx Security Solutions to deploy 299 IQinVision megapixel indoor day/night vandal IP domes and infrared units, and monitoring stations running Milestone XProtect Enterprise IP video surveillance software.

**The advantages:** The Nebraska Medical Center has reduced its overhead by eliminating the majority of its one-on-one bedside observation staff. There are a dozen monitoring stations located throughout the medical center and each station allows one or two technicians to observe multiple patients simultaneously. In just the first two months of being operational, the video system has streamlined the process for monitoring patients and saved The Nebraska Medical Center thousands of dollars.

**Nebraska Medical Center**

With nearly 5,000 employees and 1,000 physicians, The Nebraska Medical Center is the largest health-care facility in Nebraska. The hospital hosts 624 beds and numerous departments that cover pediatrics to oncology to bio-containment. The staff is responsible for patients of all types, including some at-risk patients who need around-the-clock monitoring.

Until recently, when a patient required 24/7 observation, the hospital placed a staff member in the room to keep an eye on the patient. This was standard practice for patients who, for example, were on suicide watch, prone to violent outbursts or in a critical state of health. It is typical for the medical center to have two or three dozen patients being watched in a one-on-one scenario on a given day, which put a strain on staffing costs.

The Nebraska Medical Center was looking for an opportunity to improve safety for patients, while also reducing its overhead costs. In the spring of 2011, Maureen Goltl, an operations manager at The Nebraska Medical Center, was asked to investigate video monitoring as an option.

"Our goal was to ensure patient safety and to reduce costs," Goltl says. "We have always had a population of patients who are confused and agitated; patients who we are not comfortable left alone in their rooms. It was necessary to staff those rooms for round-the-clock observation. At a time where we needed to reduce our staffing, installing video monitoring cameras at almost every bedside was the best option and helped a great deal."

Goltl organized a large planning team, and by the fall—a mere eight months later—the system was deployed and operational.
Partnering for success
With the planning team weighing their options of possible vendors on this project, they decided to work with Sentrixx Security Solutions, a vendor with which the facility already had a longstanding relationship. Over the years, Sentrixx, a division of Control Services, Inc., has provided building automation solutions, intercoms, Hugs Infant Protection and other electronic security devices to the hospital.

In 2009, Sentrixx installed 13 high-resolution Axis IP cameras in the Adult Intensive Care Unit at The Nebraska Medical Center. These cameras were controlled from a monitoring station running Milestone XProtect® Enterprise video management software. They used this as a foundation for planning the new solution they wanted to deploy.

"We had a set of business requirements," says Goltl. "We wanted fixed cameras. We did not want them to record. And we needed to be able to see a patient at night, in the dark."

Sentrixx provided a turnkey solution, handling all of the installation: Dell servers, the cameras and the monitoring stations running XProtect. "We ran every inch of wire," says Phil Fenton, Manager at Sentrixx Security. "They had a timetable because they were able to trim a significant amount of overhead dollars. We wanted to make sure their installation deadline was met and that it provided a tested and working system."

The setup
Sentrixx installed 299 IQinVision Megapixel indoor day/night vandal IP domed cameras. These provide full real-time video at 30fps with a 720p resolution. These are unobtrusive dome-style cameras that blend into the hospital's aesthetic, and they are vandal resistant. Along with each camera, Sentrixx installed an infrared unit, which was placed separately because current IP cameras with built-in infrared capabilities did not offer the high-resolution capabilities required for this deployment. Sentrixx also installed 10 servers and 12 monitoring stations, many of which consisted of Dell all-in-one systems. To house these stations, Sentrixx brought on Kiewit Construction to build cabinets that matched the existing environment. Joe Turecek of Kiewit Construction also acted as a Project Manager on the overall project.

"We created a closed network that allowed each hospital unit to operate separately," says Fenton. Each unit has a maximum of 42 cameras. Since each unit operates separately, there is no need for all the cameras to be available on a single server. Because of this, Fenton determined The Nebraska Medical Center only required XProtect Enterprise for this deployment, which the facility was already using in other areas of the hospital. Had there been a need for all 299 cameras to be available to a single server, they would have chosen to deploy XProtect® Corporate. "They already had the XProtect Enterprise license and it was affordable to load it up on 10 servers. That's the beauty of the flexible Milestone Systems license model."
But Fenton goes on to highlight a different reason for XProtect being the right choice for this project. “What’s really important to the customer about XProtect is the simplicity of its user interface and its reliability.” Fenton explains, “Sentrixx has standardized on Milestone Systems because of these two factors.”

In the field
Sentrixx trained a core group of staff members at The Nebraska Medical Center, including Goltl. They quickly learned how to use the software and perform troubleshooting. Those staff members, in turn, have trained more staff.

"It’s pretty easy software to figure out so we haven’t had any problems," says Goltl. "As we have new people coming and going, they really just need to sit down for a few minutes to get training."

The Nebraska Medical Center now has seven units that are regularly staffed for manning the monitoring stations: two medicine telemetry units, two surgical units, the solid organs and transplant unit, the neurology unit and the cardiology unit.

There are a dozen monitoring stations, some of which are actively used on a daily basis, while some are only used when there is a need. On average they are monitoring about 5 to 6 patients per active monitoring station, for a total of 20 to 30 patients monitored at any given moment. This number fluctuates, and they can use XProtect to quickly activate and deactivate cameras as needed.

"They didn’t need to look at all the cameras all the time," says Fenton. The staff only needs to see a camera feed if there is a concern about that patient’s safety. "That was an important factor. With XProtect, we could take a server for a floor and put 20 cameras on it. A staff member at the monitoring station can just pull up the list of cameras in XProtect and drag over the cameras that they want to see during their shift. In the middle of the night, they can very easily add a camera to the monitoring station when they need to, which is important in a hospital setting where patients move around at all hours."

Discussing the broad set of advanced XProtect capabilities, Fenton describes what makes XProtect right for The Nebraska Medical Center: the comprehensive software is easily learned and operated by staff. "The software can use smart technology to mask out an area and send a signal if the person moved beyond that area, but with the amount of activity in a hospital room, they really needed something that would be as simple to manage as possible."

"The video is not really treated as a security surveillance application," Goltl elaborates. "It’s a patient care application."

The benefits
The Nebraska Medical Center can already cite a number of benefits even after such a short period of use. The deployment was fast and easy, and training staff on XProtect software took practically no time.
It is too early for them to put a number on how much this has helped with regard to staffing and reducing the facility’s overall spending, but Goltl says they have already seen significant savings. "I haven’t seen a dollar amount since it is so early, but I know we have already saved ourselves thousands of dollars and we anticipate recouping the cost of the cameras within 7 or 8 months."

Then there are the people being protected - patients and sometimes staff members. "We recently had a patient who was somewhat aggressive and agitated," recalls Goltl. "We placed a person in the room with this patient, but we also decided to keep them on the monitor so the person watching the monitor could tell when the person sitting with that patient needed help. We wanted to make sure they were both safe."

**About Sentrixx Security Solutions**

Sentrixx Security Solutions, a division of Control Services, Inc., offers our regional customers value added service and system integration through a relationship focused design process in our four key areas – IP Cameras/CCTV, Access Control, Infant Protection, and Alarm Monitoring. For more information, visit [http://www.sentrixxsecurity.com/](http://www.sentrixxsecurity.com/)

**About The Nebraska Medical Center**

Formed in 1997 by combining the operations of University Hospital, Bishop Clarkson Memorial Hospital, and their ambulatory care facilities, The Nebraska Medical Center is Nebraska’s largest health-care facility in Nebraska. The medical center has more than 4,900 employees and over 1,000 physicians in all major specialties and sub-specialties on staff. More than 350 medical and surgical residents assist in training and educating a thousand students on campus in a given year. The Nebraska Medical Center serves patients regionally, including Nebraska, Iowa, South Dakota and Missouri with comprehensive oncology, neurology and cardiology programs.

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