

Case study

Miami Children's Hospital

Miami, Florida



Centralized operations enhances security, improves services and performance

Miami Children's Hospital is a world leader in pediatric healthcare and South Florida's only licensed specialty hospital exclusively for children. The hospital is dedicated to exceeding the expectations of children and their families, by giving them control and providing world-class service.

The hospital believes in taking a world-class approach to non-clinical operations as well, which ultimately improves the environment of healthcare. Focused on operational efficiency and improved security, the hospital called on Johnson Controls to conduct upgrades to security systems throughout the hospital campus, and to serve as its technology contractor for the development of a central operations center housed in its newly constructed central energy plant.

With 289 beds, more than 650 physicians and over 2,000 employees, Miami Children's is renowned for excellence in all aspects of pediatric medical care from birth through adolescence. And, it is home to Florida's only freestanding pediatric trauma center. Despite its clinical success, the hospital was challenged with operational inefficiencies associated with multiple energy plants and disparate control systems. In addition, the hospital wanted to implement security enhancements recommended to it by the Department of Homeland Security (DHS). The hospital had requested the DHS assessment as part of its commitment to security excellence.



The new Central Energy Plant.

“We were extremely decentralized on a number of fronts including energy plants and security monitoring stations, but also call centers for things like maintenance, environmental and hospitality services and even patient transport,” says Robert Nowlan, vice president of clinical support services. “When the master plan allowed us to add space for increased emergency generator capacity, we saw it as an opportunity to centralize these operations for improved performance, and Johnson Controls was at the table to help with that strategy.”

system, including new card readers and identification badges that incorporate barcode technology.

A Johnson Controls DVN 5000 (digital vision network) system along with Internet Protocol (IP) based surveillance cameras allow security personnel to view, analyze and archive video data from programmed intrusion points campus-wide. “The P2000 system combined with the DVN system has taken us to the next generation in security monitoring and will allow us to make future expansions to our remote sites more economically because of their open architecture,” notes Nowlan.

“When we really looked at the P2000, combined with the DVN5000, it really was a “no-brainer”. It was the only solution/combination we could find to meet the vision of the Hospital; and become centralized through web-based operations.”

ROBERT NOWLAN
VICE PRESIDENT OF CLINICAL
SUPPORT SERVICES
MIAMI CHILDREN’S HOSPITAL

Security monitoring is focal point of central operations center

For Miami Children’s Hospital, providing a safe environment for patients and their families, staff and physicians is a priority. In a collaborative effort between Miami Dade County and the Department of Homeland Security, a risk assessment was conducted of the hospital campus, which uncovered some opportunities for improved security that could be funded by the federal government. “Because of Johnson Controls ability to integrate our existing systems with newer technologies, we were able to leverage this opportunity and expand our system to secure and monitor additional points throughout the campus. In fact, we have the ability to completely lock down the campus,” states Nowlan.

Bringing it all together

What makes the enhanced security systems at Miami Children’s even more valuable is, the centralized access to them from the hospital’s new central operations center. The operations center is the heart of the central energy plant, a 45,000-square-foot addition to an existing plant that gave the hospital the space needed to house backup power equipment that is critical to operations and patient safety during emergency situations.

As Miami Children’s technology contractor, Johnson Controls provided design-assist services, project management, sourcing and implementation of the low voltage systems and equipment for the center. “During this process, Johnson Controls worked with us as a partner rather than a vendor to make sure we addressed the concerns of individual departments,” says Nowlan. “Their primary interest



Robert Nowlan, vice president of clinical support services, Miami Children’s Hospital.

Security improvements include the installation of a Johnson Controls P2000 security management system and a complete retrofit of the card access

was to help us bring the hospital up to standards they have seen elsewhere by optimizing our existing systems and adding new technologies.”

In addition to the security system upgrades, Johnson Controls was responsible for extending the hospital’s Code Blue, medical gas monitoring, fire alarm and telephone systems to the new center. An IP backbone installed by Johnson Controls serves as a common platform on which all these technologies reside while avoiding the costs associated with redundant cabling. A Metasys® building management system, also installed, provides monitoring and control of the fuel oil system, emergency generators and switchgear, HVAC equipment and lighting systems at the new central energy plant.

The center’s ‘island workstation’ and video wall (comprised of six 42-inch monitors), designed and implemented by Johnson Controls, serves as an interface for monitoring and control of all the integrated systems. Because it is a communications hub, the center also serves as a centralized dispatch station and call center, taking the place of 11 departmental stations for things like patient transport, environmental and hospitality services, and plant operations, among others. “As many as seven trained personnel are able to man the console and multitask because of the information they are able to see. And, an integrated, computerized work order management system allows operations staff to initiate and track work orders,” says Nowlan.

“In the end, Johnson Controls has helped us become more operationally efficient and accountable, which is something we’ve been working towards. As we continue working toward completion of our approved Master Facility Campus Plan, we can easily extend the security systems and other technologies to those facilities. Additionally, the Metasys system installation in the new central plant provides us a platform for a more comprehensive building operations system and centralized control of our energy plants. I look to our partnership with Johnson Controls for the development and implementation of that strategy.”



IP based video surveillance cameras allow security personnel to view intrusion points, campus-wide.

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The new Central Operations Center will replace multiple dispatch stations.

