NICKLAUS CHILDREN’S HEALTH SYSTEM

CASE STUDY: Building the Hospital of the Future

SAFER, SMARTER, GREENER
Nicklaus Children’s Health System is a nationally recognized, 309-bed children’s hospital, 15 outpatient care centers with more than 790 attending physicians and 250 pediatric sub-specialties. The facility serves not only the multicultural melting pot of Miami, Florida, including three other counties in Southern Florida, but draws patients from across the US, Latin America and other international locales.

Few missions are as inspiring as helping sick children and their families in their time of need. This sense of purpose is deeply embedded with the employees, physicians, and volunteers who make up the Nicklaus Children’s Health System, many of whom have been part of the organization for decades. Together, they strive to create the feeling of “home” and “family” throughout all clinical programs, and a sense of play to support the health and well-being of their young patients.
An organization’s mission and compassion can only be expressed when there are the means to deliver on these aspirations. The business and operational challenges that beset hospitals throughout the U.S. are daily realities for Nicklaus, too. The fact that 67 percent of the hospital’s patients are insured by Medicaid means that it’s not enough to be nationally recognized for top clinical services. The hospital must also be a star performer in its business operations to build the financial stability required to ensure it is there for children both today and in the future.

To make such a massive cultural and operational shift, Nicklaus needed a partner who not only shared their vision, but who would empower them to reach it with new paradigms in thinking and in operations. It found such a partner in its accrediting body, DNV GL Healthcare. Nicklaus received its first accreditation from DNV GL Healthcare in 2016.

“We chose to work with DNV GL Healthcare because they would be a true working partner with us, instead of an organization that just checked off the boxes to be sure we were compliant,” noted Jose Perdomo, Senior Vice President of Ethics and Compliance and Privacy Officer. “We have always pushed the envelope on clinical excellence, and in fact we developed our own clinical excellence index to monitor 55 metrics required for quality care. Our previous accrediting organization did not give us any credit for this achievement. DNV GL Healthcare recognizes the progress we have made.”

Along with performing annual surveys (as opposed to every three years), DNV GL Healthcare also uses the ISO 9001 quality management system as part of its accreditation process. ISO 9001 was originally created for the manufacturing industry, but has been adapted by DNV GL Healthcare for hospitals. ISO 9001 creates a specific roadmap for hospitals to not only adhere to the Conditions of Participation for the Medicare program, but also to improve its delivery of healthcare services at every level.

“We used the new accreditation system with DNV GL Healthcare as an educational opportunity and a methodology to standardize how we identify and adopt processes throughout the hospital. ISO 9001 is a framework that adapts to every area in the hospital, from supply chain to finance to revenue cycle management,” Perdomo said. “It gives us the framework to build layer upon layer of process improvement. Combined with our technology, we now have an accreditation system that monitors us every day, ensuring that we are always excelling.”

This has helped Nicklaus Children’s Health System to reach a state of efficiency, standardization of quality care, and patient safety that makes it the hospital of the future. Such an achievement required a totally new view toward running a hospital.

“From an operations perspective, a hospital is really a collection of processes—workflows that become the culture which, in turn, become the standard of care,” said CEO M. Narendra Kini, MD, MPH. “With digital technology, we standardize smart processes that really don’t have to be done by humans, thereby freeing our nurses and skilled personnel to focus on their clinical priorities: taking care of patients. With this approach, we know that standards of quality and patient safety are always met, and immediately corrected if there is a problem.”

This unique vision is why roaming the hallways is like visiting a hospital’s version of Tomorrowland. Robots navigate the floors performing tasks ranging from supply delivery to sterilizing operating rooms. Staff wear specialized tooth buttons that automatically pinpoint their location, reducing time formerly spent searching for an individual to handle a specific situation. Location technology is used to find wheelchairs and other specialized equipment, as well as guarantee the readiness of each crash cart in the hospital within 2–3 minutes. That task used to take several hours. That innovation has saved Nicklaus about $240,000 a year. Special detectors verify clinicians have washed their hands upon entering each and every room. (A telemedicine center also provides connectivity between physicians and patients across the globe.)

“We wanted not only to know where things are, but to use the technology to know more—are patients seen in a timely manner? Do healthcare providers wash their hands prior to each patient visit as required? How could patient safety be improved? This system enables all of these areas to be monitored and measured,” said Nicklaus Chief Information Officer Edward Martinez.
However, transforming a well-loved and respected institution is not a decision that is made quickly, nor is it a process that happens overnight. At Nicklaus, the change was leadership-driven from the start, although executives also recognized that engagement and acceptance throughout the entire hospital would be necessary for success. Questions like “What in the world is ISO 9001? How will it affect my job? Will I still have a job? Why do we need to change at all?” were bound to be raised. Proactive engagement was a golden opportunity to make these changes into a broadly supported, institution-wide transition, instead of a top-down initiative.

“We created a roadmap to educate and engage every group in the hospital, from trustees to the cleaning staff,” noted Marisol Llerena-Castro, MBA, MHSA, Director, Accreditation and Regulatory Compliance and Environment of Care. “Our goal was to anticipate the concerns that each group would have and to address them head-on, along with presenting the vision that drove these changes and how it would benefit everyone.”

“Our staff is very senior; many employees have been here 10, 20, 30 and more years. This direction would require some changes, but we wanted them to know that they would be part of that change and that it would help them do their jobs better and more easily than before,” she continued. “Most of all, our patients and their families would be better cared for and supported.”

During the course of the first year, meetings and discussions about the new standards and the reasons behind the changes were held throughout the hospital, starting with the board and executive leadership and extending through the medical staff, nursing teams, and all other hospital teams. Brand ambassadors were also chosen among staff to introduce and tout the innovations.

“When our senior physicians went from ‘Why do we have to change,’ to ‘This is a good thing. We’ll be even better, thanks for bringing in a team that cares about process and quality,’ we knew that this program was truly accepted,” Llerena-Castro noted.

In addition to multiple information sessions, Castro and her team created a novel engagement strategy that built excitement at every level of the facility. “What better theme in Miami than a cruise ship?” she pointed out. “Cruises are fun and exciting, and we were going on a journey to new shores and ports of call—even better quality of care and quality of our work life.”

The cruise ship was an actual cut-out of a ship, stocked with trinkets and gifts “docked” at each floor and nurses’ stations periodically. Castro’s team, in full cruise regalia, served as the crew, inviting their fellow staff members to get into the spirit of adventure and adding the sense of play that is part of Nicklaus’ child-centered values and culture. In a “Jeopardy”-like game, staff answered questions related to quality standards to win prizes.

The arrival of the cruise ship brought excitement while educating and refreshing staff on important quality standards and related practices.

To bring the message of Nicklaus’ new standards and accomplishments to the world, marketing executives developed an external marketing and public relations campaign. It included billboards announcing their accreditation by DNV GL Healthcare. The campaign informed the community how Nicklaus was “raising the bar” in healthcare for children. The message was even relayed to callers to the hospital who were placed on hold.

In the long term, Nicklaus aims to know where individuals and items are located and to use intelligence based on that location data to boost the efficiency and safety of patient care.

Ultimately, Nicklaus’ leadership foresees a repository of best practice processes that cover every aspect of hospital operation - clinical, customer service, and management. Such a quality playbook could also be used by other hospitals and healthcare organizations, truly raising the bar for care of every patient in every aspect of hospital operations.
Verifying the readiness of crash carts—those repositories of supplies and equipment that must be at the ready for any emergency—is one of the banes of the nurse’s existences. Here’s what is usually involved:

- Locate the checklist (which may be a piece of paper in a drawer).
- Sit with a colleague and verify that every drawer contains the correct equipment.
- Verify the expiration dates of the contents of each drawer.
- Order new supplies if needed.
- Input the notes into the computer.

NESA Solutions, a Miami-based company in which Nicklaus has placed an equity investment, has changed the entire process. Using what’s known as radio frequency identification (RFID) technology, here’s what the process looks like now after pressing a few buttons on a computer or tablet:

- Inventories are automatically reported.
- Expiration dates are verified automatically.
- Needed items are automatically ordered.
- A nurse logs onto a tablet to verify the inspection.

“Thirty percent of a nurse’s time is spent doing non-nursing tasks,” observed Neil Salem, co-founder of Nesa Solutions. “We are changing that. We build intelligence into the actual location so that safety processes and monitoring is automated.”

“Clean sweeps” (i.e. Environment of Care and/or Physical Environment Rounds) of rooms are another chore that typically takes nurses away from their patients. With NESA’s technology, nurses can use a tablet to automatically scan the room and verify that everything is in place and ready for patient occupancy. The time required for these clean sweeps dropped from 3-4 hours to less than 5 minutes.

Mandatory hand washing before entering a room is essential to reduce the infections that are a huge patient safety hazard and support the patient experience. Yet, compliance with this basic safety practice remains low. At Nicklaus, a geo-fence is placed in an area around the sink or antibacterial dispenser in each room, which is activated when the clinician enters it and stays for a period of time, indicating they washed their hands. This event is electronically reported.
DNV GL-Business Assurance is a world-leading certification body. We help businesses assure the performance of their organizations, products, people, facilities and supply chains through certification, verification, assessment, and training services. Within healthcare we help our customers achieve excellence by improving quality and patient safety through hospital accreditation, managing infection risk, management system certification and training. The DNV GL Group operates in more than 100 countries. Our 13,500 professionals are dedicated to helping our customers make the world safer, smarter and greener.

DNV GL Healthcare is the second largest hospital accrediting body in the United States and accredits 500 hospitals in 49 states.