



Catholic Health System

Soarian Clinicals as the foundation for achieving meaningful use criteria and a comprehensive EHR strategy.

Case Study



Vital Stats

Name of healthcare organization:	Catholic Health System
Primary location:	Buffalo, NY
Founded:	1998, with roots dating back to 1848
Number of hospitals:	3 hospitals on 4 campuses: (Kenmore Mercy Hospital, Mercy Hospital of Buffalo, Sisters of Charity Hospital, and Sisters of Charity Hospital - St. Joseph Campus)
Total licensed beds:	1,060
Number of registered nurses:	2,097
Number of physicians:	1,827 physicians with privileges
Patient discharges:	42,824 (including newborns)
Outpatient visits:	1,139,509

At a Glance

In 1998, Catholic Health System (Catholic Health) was formed when four hospitals and other Catholic-sponsored health facilities united as one healthcare organization to serve the greater Buffalo, NY, region. This took place at a time when the organization was facing significant financial challenges—with aging imaging equipment and without a common IT platform to connect the various facilities.

In 2004, Catholic Health and Siemens entered into a 10-year, \$100 million partnership that would provide the financial assistance and infrastructure required for the health system to compete in its market. Shortly after, Catholic Health launched project “Equinox: transforming process, culture, and technology,” an initiative to improve quality of care and establish an electronic health record (EHR). In addition to Catholic Health’s clinical transformation, the system also engaged Siemens to move its financial systems onto a common platform, connecting patient access, patient financial services, and health information management functions. Six years later, Catholic Health continues its journey toward a comprehensive EHR solution that will help improve patient safety and advance its efforts to achieve meaningful use. Catholic Health is one of the nation’s Top 20 Networks, as designated by SDI Health in the Northeast.

Challenge

Catholic Health is a non-profit health system in Western New York that serves greater Buffalo and the surrounding areas. Officially formed in 1998 when four local Catholic hospitals and 11 nursing homes united, the roots of Catholic Health date back to 1848 with the establishment of Buffalo’s first hospital.

Much has changed since Bishop John Timon and six nuns started caring for the people of the region. Now one of the premier integrated healthcare systems in New York, Catholic Health comprises three hospitals on four campuses. The system also operates 12 primary care centers, nine diagnostic and treatment centers, two free standing surgery centers, five long-term care facilities, two adult homes, three home care agencies, counseling services, and social service and behavioral health programs. Catholic Health has witnessed tremendous growth in its healthcare ministry—most recently with the opening of a 42,000-square foot, \$32 million, Emergency Center in May 2010—but this was not always the case.

In 2001, still sorting through the details of its formation, it was clear that Catholic Health had significant challenges that senior leadership needed to address. From a clinical standpoint, the newly formed system was dealing with the cultural and operational differences between the various hospitals—which touched everything from clinical processes to back-office administration. Moreover, the hospitals were dealing with outdated equipment, particularly in their imaging departments, and Catholic Health as a whole faced a number of financial challenges.

“The system was under very significant financial stress,” says Joe McDonald, president of Catholic Health System. “If that doesn’t focus your attention quickly, nothing will.”

The leadership team of Catholic Health needed to find a creative and multifaceted solution that enabled the organization to continue its mission of providing quality healthcare. To do this, however, it needed to overcome three primary challenges:

- Stabilize its immediate and long-term financial position.
- Update its imaging and diagnostic equipment to contemporary technology.
- Standardize the system via one IT platform that would advance its development of an electronic health record.

“These were not easy challenges to address,” says Jim Dunlop, executive vice president and chief financial officer at Catholic Health. “In the end, we entered into a strategic partnership with Siemens in order to meet the specific and demanding challenges that we faced as an organization.”

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Jim Dunlop
Executive Vice President and Chief Financial Officer
Catholic Health



Solution

The Strategic Alliance

Working closely to carefully explore the needs of Catholic Health, the two organizations tailored a partnership agreement that would provide immediate and long-term assistance. The deal became known as the Strategic Alliance Agreement.

The partnership was an approximately \$100 million, 10-year contract during which Siemens would help consolidate debt and provide advancements in clinical software and hardware—enabling Catholic Health to focus on its mission to provide quality healthcare to the people of Buffalo.

For imaging equipment, the plan was to take immediate action and leverage the new partnership to decommission and replace some of its aging modalities equipment. Most importantly, however, Catholic Health would embrace Siemens Soarian® Clinicals as the IT platform that would unify the new system, seamlessly connect the hospitals, and begin the transition to an EHR—strategically positioning Catholic Health for the future.

Equinox

With the necessary solution components in place, Catholic Health leadership sought to solidify and communicate its vision for the future to the clinicians throughout the organization.

In 2005, the initiative to implement new processes and technologies that would transform the delivery of care within Catholic Health became known as "Equinox: transforming process, culture, and technology."

“What was happening was much more than a technology implementation—it was a transformation. We were fundamentally changing the way physicians and nurses

would deliver care within our ministries, and our efforts were focused on communicating as much about the new technology as we could,” says Chuck Hayes, manager of transformation communications.

Electronic Records Drive Standardization

The first major undertaking under Equinox was leveraging Siemens Soarian Clinicals to advance the organization's EHR effort. The transition to an EHR, however, was a formidable challenge for an organization just beginning to mature as a healthcare system. First, Catholic Health needed to standardize its clinical processes.

“Our charge throughout the Soarian implementation was to standardize our processes and policies across the system,” says Shanay Shearer, RN, BSN, director of IT Core Clinicals at Catholic Health. “So with each upcoming module of Soarian, we would standardize all of our processes.”

Although Catholic Health at the time was still largely a paper-based organization, the standardization effort was recognized as integral to any future technology implementations.

“Standardizing physician order sets, re-evaluating processes, and establishing policies are all pre-requisites to an EHR,” says Michael Galang, DO, chief information officer at Catholic Health. “It was our relationship with Siemens and the upcoming implementation of Soarian that spurred on the creation of the Clinical Standardization Council.”

The Clinical Standardization Council (CSC) is a group of multi-disciplinary stakeholders that represent the entire continuum of care—physicians, nursing, IT, pharmacy, communications, and even administration—whose sole purpose is to discuss the best way to standardize. Since its inception, the CSC has acted as the starting point for nearly every standardization or procedural effort (e.g., automated workflows) at Catholic Health.

“In terms of quality and capability, the Siemens systems are head-and-shoulders above the others.”



Mike Reilly
Vice President of Primary Care and Imaging Services
Catholic Health

Implementation

Catholic Health integrates advanced technology in a tradition of medical excellence and compassionate care in its mission to Western New York.

Connecting Clinicians

If the Catholic Health transformation and the entire Equinox initiative could be summarized into a single word, it would be “connecting.” Catholic Health’s plans for the future and Siemens’ vision of Soarian depend on the ability to seamlessly pass clinical information across physical boundaries and deliver the right information to the right person at the right time.

For Catholic Health, this meant not only bridging the distance between its various facilities, but also closing the knowledge gap between the IT system and the various clinical disciplines.

“It was critical to show how Soarian enables communication between clinicians, especially our physicians,” says Lisa Cilano, System vice president of Finance, CFO of Acute Care and Service Lines. “The common belief was that the technology we had was ‘good enough’ for the work they were doing. What was missing was a demonstration of what additional benefits—particularly with regard to physician workflow tools, online chart completion, and remote acknowledgment/sign-off capabilities—they could realize with Soarian.”

Clay Bozard, vice president, IT for Integration and Customer Service at Catholic Health, says, “Soarian is the backbone of our communications throughout the system, capable of distributing information among clinicians—from nurse to physician, for example—as well as across the continuum of care—that is, from the bedside to the radiology department.”

Soarian Interoperability with the Modalities

At the onset of the partnership, Catholic Health’s primary goal was the immediate replacement of its aging imaging equipment, such as CT scanners and ultrasound equipment, with Siemens solutions. Over time, other modalities have moved in a similar direction, but the focus has shifted slightly in recent years.

“As the need for physicians to share information grows, it becomes increasingly important to ensure that our imaging and other modality equipment is able to benefit from the interoperable capabilities of Soarian,” says Mike Reilly, vice president of Primary Care and Imaging Services for Catholic Health.

Catholic Health is in the process of implementing its first Siemens Digital Mammography unit at Sister Hospital, an Artis zee® biplane system at Mercy Hospital, and an ARTISTE™—part of Siemens image-guided radiation therapy portfolio—at Sister Hospital’s Saint Joseph Campus. Soon, Catholic Health will also add Siemens new Flash CT and MRI to its arsenal. All of this was done knowing that Catholic Health is converting from the Siemens Magic solution to Siemens syngo® PACS—across all three hospitals and imaging centers.

“We find that more and more physicians—particularly in some subspecialties, such as neurosurgery and orthopedics—want to see the images, and syngo gives us a new platform that connects better with Soarian,” says Reilly. With the combination of Soarian and syngo, physicians can access those image views online from anywhere, at anytime, with more advanced functionality and higher quality images.

“Siemens is doing a really good job on the modality side of having some innovative, first-in-market products,” continues Reilly. “If you’re buying anybody else’s MRI right now, it’s because you’re settling. In terms of quality and capability, the Siemens systems are head-and-shoulders above the others.”

“Soarian Clinicals gives physicians a clinical data repository and a common view of the patient, which can be accessed anywhere they have an online connection.”

Lisa Cilano
System Vice President of Finance
CFO of Acute Care and Service Lines
Catholic Health



Workflow and the Role of Committees

“You can have the most interoperable IT systems in the world, but if clinicians aren’t properly leveraging the system, it will not add an ounce of value to the organization,” says Rosemary Kuca, RN, MSN, director of IT Ancillary Clinical Systems at Catholic Health.

With a common IT platform in place, the final piece of the puzzle is standardized workflows—as they are the thread that weaves among clinicians throughout the care continuum. One of the primary tenets in selecting Soarian Clinicals as its platform was the embedded workflow technology—or Healthcare Process Management (HPM). Catholic Health recognizes the value of HPM in improving patient outcomes and standardizing processes, and it remains a core component in the rollout of its EHR.

“We’ve implemented a handful of the workflows that have been beneficial,” says Dr. Galang. “We haven’t, however, fully realized the potential that workflow technology can bring. That’s where we are currently focusing.”

With primary objectives to improve care coordination and enhance operational efficiencies, Catholic Health has developed three workflows using HPM:

1. Nurse Assessment Workflow, which helps nurses coordinate care among the interdisciplinary team (for example with Dietary and Respiratory Care) at the beginning of a patient visit
2. Health Information Management (HIM) Workflow, which helps facilitate the creation of its legal health record
3. Venothromboembolism (VTE) Prophylaxis Workflow—when finalized—will help notify clinicians if prophylaxis has been ordered and administered, then escalates if steps are incomplete or delayed

The development of a workflow at Catholic Health begins with a user request to the Clinical Standardization Council. The council will evaluate and prioritize the suggestion and then pass it along to the Clinical IT Advisory Committee, which is responsible for bringing together the clinical stakeholders to discuss and standardize the workflow.

Looking ahead, Catholic Health's next workflow projects will be tailored to infection control and Foley catheter processes.

Trailblazers in Advancing Health Information Exchanges

Catholic Health System is no stranger to electronic health records. In fact, Catholic Health and other healthcare institutions in Western New York have been trailblazers in advancing the idea of Health Information Exchanges (HIE) and Regional Health Information Organizations (RHIO).

Catholic Health is one of many healthcare organizations in the region that are part of the Western New York Clinical Information Exchange—known as HEALTHeLINK™. The non-profit, non-governmental RHIO is an unprecedented collaboration among physician, hospital, and insurance organizations to share clinical information in efficient and meaningful ways to improve the delivery of care, enhance clinical outcomes, and control healthcare costs throughout the region.

HEALTHeLINK recently received a \$16.1 million award as part of the Beacon Community Cooperative Agreement Program for a national electronic health records initiative. The award given to HEALTHeLINK was the largest in the United States.

“We’re doing this in the name of patient safety and patient clinical care improvement.”



Michael Galang, DO
Chief Information Officer
Catholic Health

The Road to Meaningful Use

Catholic Health’s ongoing effort toward a completely functional EHR proved extremely useful in early 2009 when the American Recovery and Reinvestment Act (ARRA) legislation was passed.

“Our progression toward an EHR began in 2004, so the meaningful use criteria did not significantly alter our plan as much as it validated our present course,” says Dunlop. “We estimate that the ARRA legislation is worth about \$27 million in reimbursements over the next four years.”

Catholic Health’s first step toward EHR was its initial standardization effort. Although it took place in a paper-based world, standardizing order sets and defining processes and policies laid the foundation for an automated system in the future. After the partnership with Siemens was formed, the first major IT implementation to advance the EHR effort was Soarian Clinical Access, which enabled physicians to access patient information on campus and remotely.

“With the online portal provided by Soarian Clinical Access, our physicians can view a patient’s information from each of our facilities as a whole, which was a huge step forward that shows the power of this technology,” says Cilano.

While the ARRA legislation didn’t change the direction Catholic Health was heading, it did help the organization reexamine how to get there. After several road-mapping sessions with Siemens—a collaborative process to align priorities and develop an action plan with defined objectives—Catholic Health started taking action to satisfy and achieve the meaningful use requirements of today and beyond.

The first reprioritized initiative was the Med Administration Check™ (MAK) solution, which provides the care team with bar-code technology to help verify the “rights” of medication administration—the right drug, dose, route, time, patient, and documentation—at the point of care. Utilizing its committee structure, Catholic Health quickly formed a number of groups to tackle the initiative, including an interdisciplinary committee, an IT/Pharmacy workgroup, an Executive MAK committee, and a dedicated Pharmacy workgroup. The groups worked together to develop a plan that started the Med Administration Check deployment at Catholic Health’s biggest—and most technically difficult—facility first and was successfully completed in seven months.

The road-mapping process also revealed that Catholic Health needed to accelerate its original 10-month timeline for implementing the computerized physician order entry (CPOE) capabilities in order to maximize reimbursements under ARRA. After careful consideration, Catholic Health and Siemens decided to implement—using an Agile Implementation Methodology (AIM)—a model designed to bring customers to meaningful outcomes faster, more predictably, and at less cost. In the end, with the AIM approach and the dedication of the Catholic Health team, the CPOE pilot program launched in six months.

“There are still processes to be worked out within the system, but we are one step closer to having a complete, closed-loop process in place at Catholic Health,” says Shearer. “Combined with Med Administration Check, the Soarian CPOE implementation is one of the most significant improvements in our patient safety initiative in the history of Catholic Health and its individual ministries.”

Results

Today, Catholic Health hardly resembles the organization it was at the onset of the 10-year partnership with Siemens. Through extraordinary vision from Catholic Health leadership and its Siemens counterparts, Catholic Health is now one of the leading healthcare providers in the state—and in one of the most forward-thinking regions in the country.

Leading the charge with its Equinox initiative—and the goal of transforming process, culture, and technology—Catholic Health leveraged its partnership with Siemens to build an IT infrastructure that would support the entire modernization effort and position itself strategically for the future. Just as important, the plan to place Siemens Soarian Clinicals at the center of its IT strategy is producing results today.

Addressing the Medication Safety Initiative

Soarian enables Catholic Health to break down the barriers that used to exist between pharmacy, nursing, and physicians. Catholic Health is building a true closed-loop process when it comes to medication administration—MAK, CPOE, and Siemens Pharmacy.

“We’re doing this in the name of patient safety and patient clinical care improvement,” says Dr. Galang. “We’re now able to ensure the six ‘rights’ of medication administration are being followed.”

Catholic Health now has at its disposal:

- Bar-coding technology that helps care providers validate and verify the “rights” of medication administration
- Clinical notifications that make the appropriate people aware when something is not right
- Clinical Conflict checking helps the care provider prevent conflicts between new and existing medication
- Point-of-care decision support capabilities that provide caregivers the right information at the right time so the right person can make better decisions

Improved Report Turnaround Time

The ability to access information quickly and continue the flow of that data to the next step in the care process is critical to Catholic Health. With Siemens Soarian as its common platform, Catholic Health has realized a 75% reduction in reporting time—from over 8 hours down to less than 2 hours—utilizing Siemens RIS/PACS solution.

Users of the RIS/PACS solution are anticipating even greater benefits as Catholic Health moves to the Siemens *syngo* platform later this year.

Physician Satisfaction and Affinity

“Physician satisfaction is at the top of the list when it comes to the benefits of Soarian Clinicals,” says Cilano. “It gives them a clinical data repository and a common view of the patient, which can be accessed anywhere they have an online connection.”

Another physician satisfier is the Electronic Documentation Management (EDM) solution Catholic Health has interfaced with Soarian. The collective solution:

- Provides seamless access to patient results and chart completion capabilities—from a single point of entry within Soarian.
- Enables physicians to electronically sign and edit dictated reports from any location—reducing the number of visits to the HIM department.

In addition to improved physician satisfaction, Catholic Health is now leveraging the implementation of Soarian as a recruitment method. “This is probably the area where we’ve gained the greatest amount of traction with Soarian—our ability to keep business within our network and attract new physicians,” says Dunlop. “Especially physicians coming out of residency programs, who are accustomed to having the latest and greatest tools at their disposal.”

Positioned for the Future

Catholic Health System has made significant progress on its journey and has realized many milestones since the beginning of its strategic partnership with Siemens. The three goals established at the onset of the partnership have been, to a large extent, achieved. However, there is still much work to be done.

“We are always striving for clinical improvements and looking for new ways to leverage IT to support our efforts,” says Dr. Galang. “For now, we continue to focus on achieving meaningful use criteria along with our other strategic projects.”

Catholic Health expects to be eligible for Stage 1 ARRA reimbursement in early to mid-2011, a milestone that Dunlop estimates is worth about \$11 million to the system. From an IT perspective, this means continuing the CPOE rollout while preparing for the implementation of Siemens Med Reconciliation and e-Prescribing in the latter part of 2010.

“We are a team. We’ll become meaningful users of the system, and we’re relying on Siemens and our partnership to deliver those solutions,” says Dunlop. “Like we have in every step of our partnership—we look forward to the next challenge.”

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