Columbus Time Frame Represents Unprecedented Challenges

Health Care Software Answers the Call

"We proved it could be done, but I'm not sure I'd want to do it the same way again," laughs Matthew Hamilton, president and CEO of Columbus Healthcare. Hamilton is referring to the incredible four-month timeframe under which he, his entire staff and more than 40 vendors worked to build and open New Jersey's largest free-standing long-term-term acute care hospital (LTACH). With 63 beds, a current staff of 150 slated to grow to 400 and room for expansion, this high acuity medical environment is made specifically for patients that have not successfully been treated in general acute care hospitals. The patients, there as a result of cataclysmic trauma, extensive surgery or disease, are the most medically complex on the planet, dependent on life support systems and continuous monitoring.

As formidable a task as building such a demanding medical environment in just four months might be, the leadership at the Newark-based facility had a specific vision that raised the bar even higher.

Global Excellence

The four-month timeframe according to Hamilton was created by a State of NJ Certificate of Need deadline which virtually carved in stone the facility's opening date of July 28. "Anything other than that date was not acceptable," he says. While one approach to meeting such a deadline might have been to get the basics in place to satisfy state requirements, that would not have been consistent with the larger vision behind Columbus. "Here, we want to build something

that is totally new, that is not in existence in the entire world," said Hamilton. "We wanted to implement the newest technologies available; and to bring the staff – including physicians at the highest levels of their disciplines – here to practice innovative new medicine." Hamilton described a facility staffed by thought leaders, developing new approaches, participating in clinical trials and being recognized for excellence around the world. To achieve this, the right infrastructure and framework had to be set up across all departments from the start – regardless of the deadline.

Attacking the Schedule

"Our staff literally worked 20 hour days 7 days a week for those four months. They pretty much did everything they needed to do to make this happen. And the same thing was true of our subcontractors and vendors," says Hamilton. "There were thousands of pieces, including two to three construction crews literally working round the clock."

Hamilton describes electricians, carpenters, and other craftsmen working on top of each other, each committed to not being the one to drop the ball and endanger the deadline. "We had instances of parts being delayed and craftspeople manufacturing them on-site to stay on schedule."

Amidst this organized chaos a vital part of the puzzle, the facility's Information System, had to be selected, programmed and ready to go live on schedule – without fail. The IT system had to not only meet the deadline but also had to be superior in its features, functionality and customizability if Columbus was to move toward its ultimate goal of becoming a world-leading LTACH.

Partnering to Meet Extensive IT Demands

"What we needed was the entire financial and administrative package and the best solution on the clinical side," says Hamilton. "We needed an integrated Electronic Medical Record system which would allow us to unpack quality clinical data that was going to be generated from thousands of patients going through the system. We needed a system that could provide us with keen and precise decision support information."

Selecting a partner that could help the facility achieve its vision was one of the most serious first steps the Columbus team would face. "We had five to six departments looking at and evaluating software systems," said Hamilton. "We had input from Clinical, Finance, Risk Management: they all would be dependent on this system and we needed to clearly and distinguishably be able to say the system we were putting in place could match our workflow requirements." In addition, Hamilton notes, management was working to ensure a thorough understanding of the interdependencies of all departments so it could be communicated to the selected IT vendor since it would be the job of the software to tie all workflows and needs together.

After narrowing the field to three potential vendors and after a period of analysis the Columbus team selected Health Care Software (HCS) and its Interactant Clinical and Financial Software System.

"What struck me most about the HCS system is that I was able to envision having patient data flow across all of our departments and we would be able to continuously scale up all of our operations on a worldwide level," said Hamilton. "All along we were planning that we needed a system that gave us an enterprise-wide reach: We couldn't be constrained with something that did one or two things well, like finance or general ledger. We had to know for a fact that the clinical
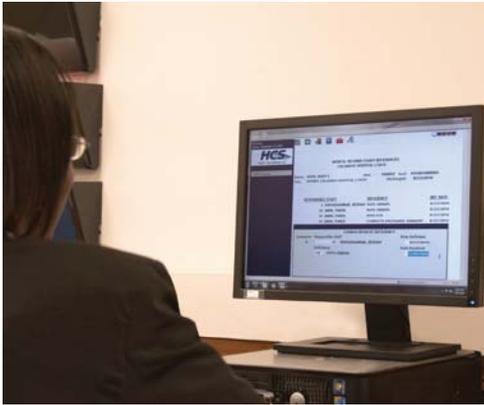
side would meet our needs." Among those needs included physicians being able to look into the system, off-site, and see a complete Electronic Medical Record, integrating all patient data that was being collected live and in real time from all the hospital's sophisticated medical equipment.

"We have beds and ventilators, for example, that continuously monitor the patient's weight, temperature, respiration and so forth," said Hamilton. "This information has to flow into the EMR live and seamlessly." This scenario would then have to play out repeatedly with all Columbus' equipment, suppliers and operational systems including diagnostics, med supply, pharma, coding, financial, claims and admissions. If this had been an existing facility or a new facility not committed to having the most sophisticated technologies, this challenge would not have existed on the level it did at Columbus.

HCS Steps Up

According to Tom Fahey, president of HCS, while the Columbus time frame was above and beyond the typical call, a proven approach allowed his company to meet the challenge.

"We learned exactly what they needed to do and then efficiently assigned the resources to implement the system – on their schedule," said Fahey. Shrinking the normal implementation schedule of six to eight months down to the necessary four, required the assignment of a larger HCS programming team than normal.

Even with additional manpower, the individual HCS team members needed to put in considerable extra effort to meet the deadline. "We were in a situation where the client said 'Jump' and we asked 'How High?'" says Fahey. Hamilton points

to how the HCS team worked with Columbus as being key to a successful implementation. "We had daily conversations and worked through exactly how we were going to implement this massive project," said Hamilton. "They showed me they were going to be on top of this project, monitoring and managing all the programmers involved." Fahey and his team gave him the comfort level and a working relationship evolved that had both parties regularly exchanging ideas to head off issues and take advantage of opportunities.

July 28: Up and Running

With no dropped balls and nothing slipping through the cracks, Columbus opened on July 28, 2010. From an IT standpoint, according to Fahey, Columbus had the complete administrative and financial solution in place. They were able to register patients, handle billing, general ledger and accounts payable, said Fahey. Everything the state required to prove they were viable. "Equally as important, we (HCS) had created the clinical infrastructure to allow Columbus to scale up and meet the needs of where their vision is going to take them."

According to Hamilton the promise HCS showed from the outset proved out in the end. "Now that we are living this day-to-day we see HCS was able to deliver all these integrated components. I can see the quality patient data: diagnoses, outcomes, medications and so forth that we need for clinical trials will be able to be produced with HCS.

Going forward, as Columbus rolls out other modules they are also taking advantage of the customizability of the Interactant software. "We are not dictating to our practitioners that this is how it's going to be done. We are routinely sitting with the stakeholders and getting their input as to

the processes they need to see implemented to be more efficient and productive," says Hamilton. "We are using the flexibility of the software to customize the system and meet those workflows."

As to the day-to-day benefits of Interactant, Hamilton says he can already see it.

"In the old antiquated process of paper used at other facilities, the main issue is "chart thinning" where older records are removed," says Hamilton. "For a patient in an LTACH it's a 25-day stay on average. Obviously there is going to be a lot of chart thinning. When that occurs clinicians are looking only at current information – the full history is gone." Hamilton states it is literally impossible for them to get a picture of the continuity of care provided to that patient without baseline data from day one up until the present time. Another weakness he points out is often the physician gets information on test results over the phone and is relying on the nurse who is giving the report. "Now, with HCS, a physician is able to go online, go into Interactant and is able to see all that information for themselves: the telemetry, the labs, the digital X-rays," says Hamilton. "Now, when the physician is talking with the nurse he or she is able to triangulate what's going on with that patient using a precision methodology that wasn't available before." This, according to Hamilton, can dramatically improve patient outcomes.

"With HCS we are moving toward one goal of being able to fulfill the true promise of IT technology," says Hamilton. "A lot of hospitals have decided getting this kind of information from their IT system is unattainable and they are not going to expend the resources to try. In 2014 when it is required for the LTACHs to be able to produce quality data those folks are going to be looking for an extension – more time. Here it is, 2010 and Columbus is already in compliance four years ahead of time, thanks to HCS."

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