

INSIDE EDGE

Rapid Implementation of Clinical IT

EXECUTIVE SUMMARY

Just as time to market, turnaround time and response time are key metrics/objectives in other industries, rapid implementation of healthcare IT may become a catchphrase and objective for our industry. Driven by meaningful use deadlines—including penalties for non-adoption—and looming pay-for-performance (P4P) arrangements from CMS, the need for speedy clinical IT implementation is becoming part of the industry discussion and may become a metric for healthcare delivery systems as reform takes hold.

The very idea of rapid implementation is counterintuitive to many healthcare CIOs who have learned the hard way that rushing IT can result in costly delays, setbacks and ultimately failure if organizational culture is not changed and physicians do not buy into the new system. Still, more and more experts recognize that after decades of experience with healthcare IT generally and IT-enabled “clinical transformation” specifically, there are now enough standards, lessons learned and vetted implementation models to accelerate the roll-out of EMRs nationwide.

We talked to three health system CIOs and two consultants—a group that includes two physicians—to discern how significant the concept of rapid imple-

mentation of clinical IT has become. There may be a bit of irony in the fact that what we’re calling rapid implementation really reflects the fact that many leading health systems are finally poised to roll systems out in relatively short times—now that they’ve spent years in planning and preparation. On the other hand, time is money goes the old aphorism, and both are in short supply.

Double time at Fletcher Allen

Drop the New England molasses-in-January metaphor for the moment—at least for clinical IT. Vermont’s Fletcher Allen Healthcare has demonstrated it’s possible to implement an EMR in only 15 months. The Burlington-based health system, which serves multiple roles as Vermont’s only academic medical center, the local community hospital and a regional referral center for a million people in Vermont and upstate New York, kicked off its initiative in April 2008 and went live June 2009.

Dubbed PRISM, for Patient Record and Information Systems Management, the comprehensive clinical system covers everything from nursing and physician documentation to CPOE, medication management and ED modules. While planning for PRISM began prior to the American Recovery and Reinvestment Act’s (ARRA) meaningful use require-

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ment, it is positioned to meet meaningful use requirements.



Chuck Podesta,
CIO, Fletcher Allen,
Burlington, Vt.

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“There were a few keys to the success of our rapid implementation,” says Chuck Podesta, Fletcher Allen’s CIO. He notes that

the typical sequence for hospitals is to conduct a selection process first, start the contract and then perform the arduous planning process that includes analyzing the current state, designing the future state and establishing a governance structure. Instead, Fletcher Allen began planning concurrent with the selection process.

“If the selection process is six to eight months long,” says Podesta, “you can put project plans and the governance structure in place and communicate the initiative to providers within the first 30 days. It takes a lot of effort to execute the parallel processes, but you use many of the same people for both, and it engages them better in a parallel versus a serial process.”

A second, not unfamiliar, key is to set up the project as an organizational clinical transformation project that reports up through operations and not IS. Executive sponsors should include titles like the COO, CMO, CNO and chief of quality but not the CIO. “That provides organizational focus,” he says of what has become an article of faith among hospitals in the last decade, albeit one often ignored. “Hospitals have known

that these initiatives should be owned by operations, but they haven’t done it—especially small organizations, who say, ‘I’ve hired a CIO, and that’s what his or her job is.’”

Ceding control

It’s a two-way street that requires change on the part of IS too. “What better way to get organizational buy-in than have the project report to the clinical or operations organization? We CIOs can have egos, and IS in general likes to control things. We have to go through introspection and give up some of the control. Then we can focus on becoming a full-functioning service center and let the clinical folks focus on clinical transformation,” says Podesta. Northwestern Memorial Healthcare, led by CIO Tim Zoph and Senior VP Julie Creamer, debuted this approach as early as 2005.

The old way of placing the responsibility for a clinical IT implementation on the CIO’s shoulders can delay the initiative from 18 months to 36 months—simply because it overwhelms the inherent scope of the CIO’s office. “When you have complete ownership in operational areas, it becomes a very powerful motivator,” Podesta says.

Another familiar key is clinician leadership. “We’re at 95 percent CPOE,” says Podesta. “You can’t get that unless you have strong clinician leadership. Part of that is the governance structure so that the change is not overbearing. Keep it simple.”

Decision-making ability is firmly anchored in the senior-executive-stocked PRISM advisory committee, which continues to meet every two weeks. “That’s where the buck stops. Once we make a

decision, that's it. It gets implemented immediately," he says. Continuity is greatly helped by the overlap of committee membership with other critical subcommittees like the clinical transformation and physician advisory committees.

Fletcher Allen started training 10 weeks before go live, offering it 24 hours a day, seven days a week to cover all shifts for 1,700 nurses and 1,000 physicians. Training combined e-learning and classroom approaches, but in all cases users had to earn certification before being given log-on privileges. Original estimates pegged an average of 16 hours of training per user; that turned out to be six to eight hours, because taking two days out of a physician's schedule was too much to ask. Still, Podesta wagers that, if surveyed today, doctors would opt for the original, longer time estimate.

Slowing the game down

For Fletcher Allen, everything fit right. Says Podesta: "By doing the planning stuff along with the vendor selection, we had enough time to think through governance and management. For those who follow a serial process, it's hurry, hurry, hurry."

Not that it was perfect. "The only thing we struggled with was not anticipating life after go live," he says, "because our focus was so riveted on launching the system correctly. All of a sudden, it's two weeks after go live, you're patting your self on the back and you get deluged with enhancement requests. You have to have an organization to process those requests and take them back to the users requesting them. That's a whole different model

than implementation. The bloom can vanish from the rose quickly."

It's a good sign though because it means users have adopted the system, and it works. "When problems go down, enhancements go up. We were at 92 percent CPOE adoption one week after go live," says Podesta. After collecting 500 enhancement requests during the first month after go live, the team realized most were arbitrary ones like changing the color of a screen. "You have to be careful in the first couple of months of doing anything you're asked to do. The life cycle of implementations is such that it isn't until months four or five that you can begin taking enhancement requests," he says.

The IT department learned to become more proactive. "We paired off and rounded, watching and asking questions. We came up with 230 items—and there was no comparison to the original 500, which we threw away. You'll get better requests five months after go live," says Podesta.

2013: close but also a long way off

"Fletcher Allen is the model for rapid implementation," says David Classen, MD, Salt Lake City-based vice president for consultancy CSC, which contributed project management to the PRISM initiative. "We're a long way off at most places for getting to meaningful use by 2013," he says.

"Rapid implementation is going to become a requirement. You can't do it leisurely anymore," says Classen, adding, "Meaningful use is not the only driver of rapid implementation, but also pay for performance at CMS. It is CMS's intent

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- Mark Wagner, director, Ambulatory Research, KLAS, Orem, Utah

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- Marc Probst, CIO, Intermountain HealthCare, Salt Lake City and HIT Policy Committee Member, Office of the National Coordinator for HIT, DHHS, Washington, DC

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Reducing Waste in Healthcare: Impact of IT

- Bob Kelly, VP, Healthcare Analytics, Thomson Reuters, Ann Arbor, Mich.

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Cerner Collaboration No. 20

- Judy Van Norman, senior director, Care Transformation, Banner Health, Phoenix
- Joel Shoolin, DO, VP, Clinical Information, Advocate Healthcare, Oak Brook, Ill.

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Growing Market for Anesthesia Information Systems

- Jason Hess, general manager, Clinical Research, KLAS Enterprises, Orem, Utah

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that meaningful use criteria are harmonized with other reform initiatives—and that will impact an increasing percent of CMS revenue.”



David Classen, MD, VP, CSC, Salt Lake City



In September CSC published “Meaningful Use for Hospitals: The Top Ten Challenges,” a whitepaper that provides guidelines to overcoming roadblocks to achieving meaningful use. A major theme of the paper: “Meaningful use, as defined by HITECH, eliminates any ambiguity about what is needed and, at a high level, provides guidance concerning how certain aspects of the inpatient EHR should be implemented ...All of these are ‘essential’ and *no longer need be debated or delayed.*” [italics added]

The white paper essentially states the case for rapid implementation: “Though the scope of process change and EHR implementation is daunting, there are now enough success stories in U.S. hospitals and health systems to show that what is called for can be done. Especially in the last 3-5 years, entire health systems have rolled out comprehensive inpatient EHRs—including both CPOE and notes—throughout multiple hospitals and achieved widespread use and adoption. Thus, with sufficient know-how and resources, hospitals can achieve meaningful use, even on the compressed timeline set for the incentives (and launching of the disincentives).”

Still, Classen acknowledges it’s not a cakewalk. “The tension will arise,” he

says, “from the fact that everyone will have to accelerate their installations and what will that do for the safety of clinical IT systems?”

Legacy of momentum

“Conceptually, the question is, how fast can you take off the bandaid?” says Richard Gibson, MD, PhD, MBA, senior VP and CIO at Legacy Health, a six-hospital, 1,100-bed health system based in Portland, Ore. “We’re choosing to rip it off quickly.”

That’s because HIT vendors like Epic, which Legacy selected for its EMR, deliver software upgrades each year, and if a health system takes too long rolling out an EMR, one hospital may be ready for an upgrade before the another hospital has even implemented the product in the first place.



Richard Gibson, MD, SVP & CIO, Legacy Health, Portland, Ore.



“It’s better to get everybody up on the same system, in a short time on the same version.

The advantage is you generate momentum and don’t waste time in a lot of navel gazing. People accept the system more readily too. They need to be on the system for six months to be able to critique it and the workflow,” says Gibson.

Legacy will go live at the first of its 30 clinics in August 2010 and the first of its six hospitals three months later. All facilities will be complete by Dec. 31, 2011. From 5,000 to 6,000 of Legacy’s

9,400 employees will use the new system, whose hardware includes a mix of fixed PCs, thin-client PCs on carts and mounted on walls in patient rooms.

“By the time the first hospital is finished, we’ll have been doing planning for 30 months,” he says, noting that meaningful use has had little if any impact on the schedule. “I think we’re well situated in terms of submitting quality data, but I’m not declaring victory,” says Gibson.

Training continuity

Another benefit of fast rollouts is that an organization is able to maintain the same training team—in Legacy’s case one credentialed for Epic. Otherwise, the health system, which hired a 36-person team for training (before go live) and support (after go live), would have to dismiss the team between individual hospital implementations, risking loss of focus.

Also, as clinicians are trained in one facility, they can provide support for clinicians at another facility in a continuing, unbroken effort. Like Fletcher Allen and other health systems implementing clinical IT, Legacy had to address the question of just how much time should be spent on training doctors. An initial estimate of 22 hours was quickly shot down as impossibly long for private physicians.

“Our goal for physicians was to train less and support more,” says Gibson, “because even if it’s possible to make the training of long duration, clinicians tend to forget much of the content any way, and it’s a better use of dollars for support.” Training, which is mandatory and requires demonstrated competence in CPOE and documentation for a user

to receive a log-on, is planned for four hours of electronic and four hours of instructor-led training.

“There will be lots of at-the-elbow support. We’re teaching doctors exactly one way. Everybody does it the same way,” he says, and they should after what Legacy has invested. Of the tens of millions of dollars the organization has spent over the years, only about a fifth goes to the vendor, according to Gibson. The rest goes to staff, consultants and operations, including a \$10 million to \$12 million hit for training. “The biggest money we’re going to spend is in training, but it’s worth it. Training that’s poor and inadequate drains the energy and money out of any clinical IT implementation,” he says.

Not so fast

Some leading healthcare-system CIOs find it difficult to even entertain the idea of rapidly implementing a clinical system, given the complexity and scope involved—and the years they’ve spent on getting things right.



Tom Langston, SVP & CIO, SSM Health Care, St. Louis, Mo.

to receive a log-on, is planned for four hours of electronic and four hours of instructor-led training.

“I’m not sure I’d classify us as having done rapid implementation,” says Tom Langston, senior VP and CIO at St. Louis-based SSM Health Care, which has 15 hospitals in Missouri, Wisconsin, Illinois and Oklahoma and was the first healthcare recipient of

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A Bridge to CPOE: Meeting Meaningful Use and Evidence-Based Order Sets

- Jeffrey S. Rose, MD, VP Clinical Excellence, Informatics, Ascension Health, St. Louis, Mo.
- Alan Snell, MD, MMM, CMIO, St. Vincent Health, Indianapolis

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Meeting Meaningful Use: Recommendations from HITSP Chair, John Halamka, MD

- John Halamka, MD, CIO, Care Group and Chair of Healthcare Information Technology Standards Panel, Boston
- Erica Drazen, partner, Emerging Practices, CSC, Boston
- Gregory J. DeBor, client partner, Health Delivery, CSC, Waltham, Mass.

February 2

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- Douglas A. Propp, MD, MS, FACEP, FACPE, medical director/department chair, Emergency Dept. and medical director, Clinical Informatics, Advocate Lutheran General Hospital, Park Ridge, Ill.

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Heartland Health, St. Joseph, Mo., is the recipient of the Malcolm Baldrige National Quality Award, 2009. Congratulations to Lowell Kruse, Mark Laney, MD and Helen Thompson and the Heartland Health team.

the Malcolm Baldrige National Quality Award. “We’ve not made any adjustments to our schedule because of meaningful use and, since we’ve been on a fairly long journey, we would be concerned that rapid implementation would increase problems with workflow and clinician buy-in. There’s a danger there,” he says.

“We began the journey 10 years ago, and the goal has always been to provide high-quality care for patients,” says Langston, and not to merely get the system implemented as quickly as possible. “The actual implementation piece is not easy, but the changes in how we deliver care in paper versus electronic environments—that’s really hard,” he says.

Populating the repository

“Training is the most important thing in advance of go live,” says Langston. SSM has installed its EMR at eight hospitals and has another seven to go; 35 physician practices are also up and running. SSM’s implementation model is to bring ambulatory sites up six weeks prior to a hospital in order to have patient data in the repository when the hospital goes live. Also, hospitals first roll out the documentation module of its EMR; four weeks later they go live with CPOE to allow clinicians to get used to it before entering orders.

“We’re progressing well on the CPOE piece,” he says. As of October 1, 2009, compliance by physicians with CPOE at hospitals ranged from a high of 80 percent to a low of 63 percent.

“Our bedside bar-code medication administration is about 95 percent. It’s probably reflective of all the planning we did. We took a lot of time to engage

physicians and nurses. They literally helped us in design and build. We have strong physician and nursing executive leadership,” Langston says, adding that in 1999 when SSM began its IT-enabled clinical transformation, “We realized we weren’t in a position culturally” yet to execute on the vision.

It took a concerted effort from a cross-section of the SSM community to change that culture before being able to implement IT-enabled clinical transformation. “I don’t think you can say enough about the process of a collaborative build and the value of pulling these groups together over months,” he says. An executive clinical-transformation steering committee chaired by the president of SSM and including all senior VPs, regional presidents and physician and nursing leaders continues to meet monthly since the initiative’s launch.

“Governance structure was very important,” says Langston, and the lengthy, collaborative planning process, which borrowed heavily from the vendor’s best-of-implementation model, put SSM squarely where it expected to be at this point. “We changed nothing as a result of ARRA.”

A balancing act

“I’m on board with rapid implementation,” says Glenn Galloway, senior VP at Eden Prairie, Minn.-based Ingenix Consulting, “but the balancing act is for IT to stay focused despite being flooded with requests for custom enhancements.”

Galloway, a former hospital CIO, says, “Rapid implementation is going to be on everybody’s mind, whatever meaningful use is defined as. But there’s not going

to be a lot of time for customization while you're doing clinical adoption. The temptation is that you bought a highly customizable system, and you want to use every bit of its potential. Having come from the world of IT, I realize you can become more of an upgrade shop. Meaningful use is going to evolve, and the organizations that keep it simple and don't over-customize are going to be better positioned to succeed."



Glenn Galloway, SVP,
Ingenix Consulting,
Eden Prairie, Minn.

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Nowhere does keeping it simple apply more than to software interfaces. Nearly all EMR systems require some kind of interfaces because they lack

at least one or more departmental or specialized application. "Those interfaces are fragile, and I've seen people underestimate the problem and fail to consider the complexity of interfaces. That slows down implementation," says Galloway.

Ingenix Consulting's training practice is geared to rapid implementation on the scale of large integrated delivery systems, which can include thousands of users. "We do just-in-time personalized training with physicians. They're not going to go to 14 hours of training when they're seeing 40 patients a day," he says. The approach includes finding a convenient time of day, e-learning and

adapting to an individual's learning style. A mix of super users from inside and outside the organization is key.

"What rapid implementation comes down to," Galloway says, "is the standard answer for any good IT implementation: good governance to drive it through the organization and to handle change requests; training that engages large groups with an individualized approach; and executive and physician buy-in that relies on key clinical leaders, respected by their peers, who team up via the governance structure."

Conclusion

Careful planning, collaborative design-and-build, clinician/executive leadership and well-funded training are all necessary pieces to any successful healthcare IT implementation. Among other things, they ensure well-reengineered workflow and user adoption. These factors require time and resources. However, rapid implementation of clinical IT will become more and more an industry standard because of the dictates of evolving meaningful use, P4P and the realities of software development. As a result, we will have to redefine change management to incorporate what we know are the successful factors of implementation into not only an accelerated timeframe but one that is continuous. SI's mission is to tap the collective mind and experience of healthcare IT leaders. Given the need for more rapid implementations, that mission is more important than ever.

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