

Elise Ames
Vince Ciotti
Barry Mathis



meaningful abuse

the rush toward EHR implementation

An examination of the problems several hospitals have encountered in their rush to implement EHR systems could help other organizations avoid the same pitfalls.

AT A GLANCE

Common problems with EHR implementation can be avoided by following these action steps:

- > Take your time—patient safety is at risk.
- > Interview implementation staff while selecting a vendor.
- > Test file conversions before training commences.
- > Conduct a risk assessment and post-live audit.
- > Tie payments to work completed, not calendar dates.

The American Recovery and Reinvestment Act (ARRA) stimulus funds have enticed many hospitals to acquire electronic health records (EHRs), and most healthcare IT vendors have enjoyed a spurt of new business. Although there has been quibbling over the “meaningful use” requirements, the program has definitely been a success in moving thousands of hospitals rapidly down the road of clinical automation. However, this rush to market has led to an unwanted side effect: hurried and poor implementations, which have negated the benefits of EHRs, with the potential to jeopardize patient safety rather than enhance it.

Such is the case at a number of hospitals that were among the early wave of EHR buyers, only to encounter such poor implementations that they have put projects on hold and/or restarted them at a slower pace, to safeguard patient safety. The cause of problems with installation primarily stems from the crush of installations that vendors are facing due to the financial incentives ARRA stimulus funding offers for implementation.

Demand for EHRs Too Great for Vendors to Handle

When the ARRA stimulus program was first announced two years ago, hundreds of hospitals went to market to either add a new EHR to their existing healthcare IT system or replace an old system with an entirely new one. The

flood of requests for demonstrations and proposals put stress on vendors' capabilities to respond. Many hospitals encountered delays of several months when requesting product presentations, instead of the usual few weeks to deliver, as harried sales teams crossed the country demonstrating EHR wares.

As countless new contracts were signed by vendors, the rush shifted from their sales and marketing departments to their implementation and support teams, who suddenly faced scores of new clients all clamoring to be live as soon as possible to meet the aggressive ARRA deadlines. Although hospitals still have two years (through 2013) to implement an EHR and still receive 100 percent of ARRA funds, many opted to implement an EHR immediately to obtain the ARRA funds in the earliest year possible. Given the uncertainty of what the final meaningful use rules would entail and how compliance would be measured, one cannot blame hospitals for demanding of vendors the fastest implementations possible.

Within vendor organizations, the pressure on implementation teams became immense, as the scarce cadre of veteran implementation personnel were suddenly tasked with far more projects than usual, all with a go-live date in the shortest possible time. Add to that the burden of recruiting and training dozens (and, for large vendors, *hundreds*) of personnel to augment the stretched veterans—many of whom became project managers—who were charged with leading the rookies. Hospitals were equally to blame, pressuring vendors to shorten project timelines drastically so their systems could go live as early as possible, paring go-live plans down to the shortest time frames, and skipping essential project tasks such as workflow redesign. This combination of rushed time lines and inexperienced personnel set the stage for the many problems that followed.

A Comedy of Errors

Some of the worst problems caused in this rush to go live, and their impact on hospitals, occurred in the following six areas.

The first step in an implementation is to plan the project according to its details (e.g., tasks, responsibilities, dependencies, training, testing).

Project planning. The first step in an implementation is to plan the project according to its details (e.g., tasks, responsibilities, dependencies, training, testing). Once the contract is signed, hospitals first meet their implementation project managers and mutually lay out to-do lists and dates. During the rush to implement EHRs, hospitals typically pressured vendors to speed up the time frame to go live. For example, if a contract was signed in January and the vendor's go-live process usually took a year, a hospital would pressure the vendor for a 10-month installation so that the system would be live by the critical October federal fiscal year date, enabling the hospital to qualify for incentives sooner. Eager to book revenue as early as possible, vendors usually complied, so tasks such as training and testing were compressed into as short a time as possible.

File conversions. Another early implementation step is to convert existing files, whether electronic or manual, from the format of current systems into the new format (e.g., room and bed files, physician lists, chargemasters, test result history). Vendor teams that perform this arcane task were as deluged as everyone else with a high volume of work, and were just as pressed for time. The result: quality decreased and errors increased. (There was no time to ask, for example, "Just what does that odd code in the old file mean?")

Training. Just how many days would high-paid nurses and medical technologists be tied up in a classroom for EHR training? To keep payroll costs down, the answer for many organizations

was “the minimum amount possible.” Add the impetus for a rapid install, and class lengths were reduced to the shortest amount of time possible, with testing foregone or minimized. Worse yet, poor file conversions meant instructors arrived on site to find the system wasn’t set up properly, so they spent valuable class time correcting errors and rebuilding files. Four-day classes were compressed into two-day sessions. Veteran instructors for EHR training are few and far between, so new trainers were often giving their first classes, with inevitably poor results. Training for night and weekend shift employees was often given short shrift. Some hospitals figured these employees could pick up the system on the job or secondhand, as stressed instructors had no time or desire to provide direct training during nontraditional hours.

Testing. Often minimized in the best of times, the amount of time set aside for testing of EHR systems has now been cut even further at some facilities. “Dummy” data from a test system often are used, rather than the hospital’s actual data, which typically are still being corrected due to poor file conversions. Interfaces are still being programmed, so there is minimal if any “integrated” testing, so processes are tested in isolation. The result: Many errors in building screens and reports go undetected, lurking below the surface of charts that show the project is progressing on track.

Go-live time frames. Inexperienced rookies on their first go-live have all the optimism of youth, and commit errors that wizened pros have seen often before and are able to prevent. Users ask a question related to how to use the system, and new implementation personnel call vendor headquarters to get answers. The support people answering the phone are often the newest hires of all, and their all-too-often response is “look it up in the manual” or “try this and let me know if it works.”

The catastrophic results are as easy to predict as they are to prevent.

An Ounce of Prevention

Common problems with EHR implementation can be addressed and/or prevented using the following action steps.

Take your time. Plan your project as thoroughly and carefully as if you or a loved one were a patient on the go-live date. ARRA dollars will hardly offset the cash flow tied up in a billing disruption that results in an accounts receivable (A/R) spike, so plan the implementation with plenty of time for each task, based on the hospital and vendor’s past experience. If the “ideal” implementation takes 12 months, allow for two extra months to tackle the inevitable problems that may (read: will) crop up. If this means paying maintenance on the old system a little longer, then that’s far less costly than a malpractice suit from a catastrophic EHR go-live and the resulting public relations nightmare for both parties.

Meet key implementation personnel prior to selecting a vendor. Hospitals pay consultants hundreds of thousands of dollars for boilerplate request-for-proposal feature checklists to vet software functionality, but rarely bother to meet anyone from the vendor organization beyond the sales reps to verify implementation deliverables. When your organization is down to two “finalist” vendors in the selection process, require a meeting with the actual project manager your organization would be assigned, along with as many members of the vendors’ install team as possible. Check resumes and references carefully. After all, implementation fees are equal to or greater than license fees these days. Why not see what you’re getting for those six- and seven-figure fees?

Test file conversions long before any training is scheduled. Did all 10,000 items in the chargemaster appear in the new printout? Are all *overflow* beds in the new room and bed master? How about changes to the physician master since the old file was converted (are physicians added and status changed daily)? Do computerized provider order alerts work correctly, and is the number of alerts appropriate? Insist on *integrated* testing—that is, using all the interfaces to standalone systems and your hospital’s actual data, not just the vendor’s dummy data that have been tested 100 times.

Invest in thorough training. Don’t just “train the trainer,” whereby a few department heads take

Plan your project as thoroughly and carefully as if you or a loved one were a patient on the go-live date.

part in a rushed class at vendor headquarters, then try to remember what they were rushed through and repeat the information to their staff. Pay the extra cost to have the classes repeated at your organization by professional instructors, using proven visual aids, scripts, and tests to validate whether staff learned what they were supposed to be taught. Would you want your radiology exam entered by a nurse who didn't quite remember how to specify a contrast, or by a physician who unwittingly overrides the warning that you are allergic to the contrast medium?

Initiate project risk management. Installing clinical systems is a risky undertaking, even if the above steps are faithfully followed. In addition to the financial risks resulting from an A/R spike and overtime to correct errors, there is the potential for widespread operational disruption: clinical results not posted correctly, orders disappearing, system outages, and staff and physician dissatisfaction—any of which can damage the hospital's reputation as a well-run institution that delivers safe, reliable care. Risks *must* be assessed and a mitigation strategy developed for each risk identified.

Conduct a post-live audit. Build into your plan a full week of post-live review before your implementation team leaves for its next ARRA install. Pay extra for it, if need be. This is the week when your organization will learn which employees need to be retrained, will likely encounter tricky problems that can be resolved easiest by taking with experts at the vendor's headquarters, and will find need to rewrite procedures that were not spelled out completely.

Tie acceptance payments to actual accomplishments. This will help to ensure that the vendor

will work with your organization to get it done right. Don't sign any contract that provides for payments based on the clock: "X" dollars on date "Y." Rather, tie payments to actual accomplishments such as training, testing, conversions, and go-live, with a large sum held back for acceptance after the first month-end reports are delivered. Make the hold-back equal to the amount the vendor demands be paid up front upon contract signing; this should be enough to hold the vendor's feet to the fire if things go wrong. If the vendor refuses, pick another vendor.

Heed the Risks

Help your hospital avoid becoming a casualty of the rush to EHR implementation by vetting implementation personnel as part of your selection process to ensure that your organization gets the few veterans that vendors have. Review a detailed implementation work plan *before* signing to vet those high fees, and allow plenty of time for critical quality assurance review and testing. Weigh risks against the benefits of a swift implementation. The surest path to meaningful use may not be an accelerated implementation if rework, poor quality, and organizationwide chaos are the end results. ●

About the authors



Elise Ames
is a principal, HIS Professionals, LLC,
Santa Fe, N.M. (eames@hispros.com).



Vince Ciotti
is a principal, HIS Professionals, LLC, Polk
City, Fla. (vciotti@hispros.com).



Barry Mathis
is a principal, HIS Professionals, LLC,
Santa Fe, N.M. (bmathis@hispros.com).