SCOTTSDALE INSTITUTE

INSIDE EDGE

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EHR Training

EXECUTIVE SUMMARY

As accountable care increasingly becomes the model for healthcare delivery, data and information provide the foundation upon which accountability is built. Without doctors and nurses well-trained in interpreting and applying that information to achieve quality, safety and cost-effectiveness, however, accountability becomes at best sloganeering. EHR training is the key to developing doctors, nurses and other knowledge workers to support accountable care.

We devote this issue of Inside Edge to creating a snapshot of best practices in EHR training, blending the perspectives of training experts at consultancy Deloitte, EHR supplier Cerner—both SI Corporate Sponsors—and integrated health system and academic medical center NewYork-Presbyterian Hospital, an SI member organization. Each offers valuable and complementary insight to a critical component of the informatics revolution in healthcare.

Well worth the cost

Training and related change-management activities typically account for 10 percent to 15 percent of the overall cost of an EHR, according to Elizabeth Murphy, a senior manager at Deloitte. "Training is the first time most end-users see the system. It's really important to get training right." There's a direct correlation, she says, between the quality of training and positive user attitude toward the system, which factors heavily in successful adoption of an EHR.

Governance and management of EHR training varies depending on the health system. Sometimes the IT department operates EHR training, sometimes another department takes it on. "What we recommend is a blended approach," says Murphy, that has trainers from IT and nurses from operations who help create training materials and deliver it early on. Training takes eight to 12 weeks fulltime, so hiring an outside firm can be a wise strategy. "You usually need large groups of trainers," said Murphy.

Training the trainers takes a couple of weeks—there's no one-size-fits-all—followed by six to eight weeks of user training until Go Live and then two to four weeks of Go Live support. Even third-party trainers require orientation to a hospital's workflow. "They may know the vendor system but not how it matches specifically to that organization's configuration," she says. "I recommend having some of those trainers in-house because they have a sense of their organization's workflow and culture. You can supplement the in-house people with contract trainers."

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Many such contractors practice independently, but many also work through staff-augmentation firms. Health systems typically submit requests to staffing agencies for trainers and Go Live support rather than shouldering the often difficult task of finding the right personnel locally. "It takes the burden of recruiting off your shoulders. You develop a set of minimum requirements, provide them with prescreening qualifications, and agree to a set of acceptance criteria" says Murphy.

Elizabeth Murphy, Sr. Manager, Deloitte Consulting

Deloitte.

"I try for local but you often need to go cross country. Many organizations are implementing EHRs right now and there is an enormous demand for qualified resources and the supply is not always able to meet that demand."

Super Users are still super

Employing Super Users is still a powerful tool to prepare end-users for new-system implementations, often as trainers in classrooms, especially to help students who fall behind. "The real reason for using Super Users is because they become the go-to persons, the experts locally" for everything from design, testing and dress rehearsals to training and Go Live support. "We look for Super Users who are peers such as doctors and nurses—even though managers are likely to have more time to devote to training," she says.

It's very hard to find Super Users among physicians. It's usually easier to find physician champions. Nurses often become the Super Users. "You want to manage any decreases in productivity as tightly as possible and keep doctors focused on caring for patients. We try to minimize the disruptions to the operations as much as possible when delivering training and throughout the Go Live," Murphy says.

Deloitte takes a variety of approaches for clients, including hosting separate training classes that allow presentation of information in multiple views and the fielding of questions from peers. The firm also creates webinars, specialized just-in-time newsletters and dedicated sections of the health system's website, depending on the organization's culture. "You look at existing organizations and decide on factors like whether training is instructor-led, web-based and how they treat policy changes. Is it via emails? Departmental meetings? You start with what they do to determine your training approach. Sometimes what they do does not work for such large complex implementations—it's a trial and error process."

Murphy's role on client projects is to take responsibility for training, change management and adoption, a huge challenge for which she usually has a client counterpart who can help determine strategy, planning and what training tools to build. Often, she helps the client organization find that person within their ranks. Those organizations—some with training departments, some without—usually bring in their own training lead. "Go Live is so large that the existing training organization is usually never big enough," she says. "Once past Go Live, you can turn training over to the

internal staff. The billing department, for example, can take over their own end-user training, if that is what they prefer." During stabilization each organization must decide whether on-going training will be centralized, decentralized or a combination of both.

Again, no one size fits all. "We try to help clients understand the pros and cons of different approaches and they end up varying from organization to organization. Some have been very pro web-based and 50 to 60 percent of their training is on webinars. It's very hard to do this without classroom component because at least with instructor-led training there's a chance for interaction," Murphy says. Another challenge with web-based training is that, when doing a full-blown implementation, "you're still testing the training during system Go Live and it's costly to redo web-based training."

To avoid that pitfall, many organizations start with instructor-led training and shift to web-based training for user support once the system is up and running. Five or six months later when the system is stable, new hires can undergo web-based training. So can traveling nurses, who may be onsite for only a week and therefore not cost-effective candidates for instructor-led training. For medical residents—who receive EHR training as part of their medical education and do residencies in multiple places—e-learning also makes sense as a way to get up to speed quickly on a local EHR.

Under the wire

"It's all about trying to give everyone just enough training just in time," says Murphy. That places a premium on the training-delivery schedule: Training needs to be as close to Go Live in as varied channels as possible.

The training from EHR vendors also varies from firm to firm. If they do not offer consulting services, they are less likely to offer training support. Some, like Epic offer tools like Epic's Training Wheels software to get organizations started. Other vendors help the organization develop tools that simulate production environments so end-users can do hands-on training. "The most effective training for end-users is workflow-based, involving a-day-in-the-life scenario," she says. And, while it's impossible to do simulations of everything, it is possible to run through important tasks like checking a patient for allergies or administering a drug. Building such data into an EHR takes time but without it training is much less effective. The most effective simulations include common patient scenarios that are specialty specific and use an appropriate patient profile. For example when training pediatricians, you want to use a scenario that reviews a preventive care visit with a child patient

"Most vendors do offer a training-application builder for which local trainers can earn certification, but the challenge is that most EHRs are highly customized for providers," Murphy says. That's in contrast to the highly standardized HR software from a vendor like PeopleSoft. "The good thing about EHR products is they're highly integrated, all connected. The bad thing is that there are so many end-users at different levels you have to train them all differently—but at the

same time you have to let them know what they do has impact on other users." For example, the information collected from the patient during scheduling and check-in may be used later during the billing process, so it is important for the front desk and scheduling staff to understand that the information they collect will be used by other staff.

A key element of EHR training is called the integrated workflow walkthrough, which allows users to track a patient from the moment of entering a hospital, view all the users who touch her medical record and how each impacts the process. That's an important capability of the electronic record, which lacks the visibility of a paper record. "People can't see walking the chart somewhere with an EHR," notes Murphy.

One of the biggest training challenges is pushback from clinicians who see the EHR as competing for time they spend with patients. Murphy' strategy is to set up a sample exam room to demonstrate how the computer eliminates the need for the doctor to physically juggle the paper folder on his lap. "We acknowledge, 'Yes, there's a learning curve. You will learn this and it will save you time in the long run.'"

EHR training of hospital end-users is much more flexible than the outpatient. "The biggest difference is the 24/7 nature of inpatient," she says. "In ambulatory, most physicians have office hours. In a hospital we can train on the weekends or in the evening. It gives us more flexibility. It's not unusual for us to have class at midnight or at 4:00 am. Office-based physicians also have a certain number of patients they must see each day, while a hospital can't control its census, making it less predictable whether nurses will be available for training. "It's things like that which factor in your goal of training 300 nurses in six weeks. You build wiggle room into your schedule. That' also why it's important to link EHR training with operations. This is not an IT project," says Murphy.

View from an EHR supplier

To be innovative in EHR training means to emphasize that it's more than about training, according to Rob Campbell, VP and chief learning officer for Cerner Corp. "The goal is end-user adoption."

Rob Campbell, VP & Chief Learning Officer, Cerner

The old model was to simply check a box if people showed up. Today organizations want to ensure end-users are actually tested for competence before Go Live, and then actually use the system as intended after Go Live. New e-learning tools can provide a good way to evaluate competency.

Meaningful Use has driven much of EHR training's new emphasis on competency and adoption: Has the training transferred to the job and work? Is it resulting in appropriate use of the system? Measurement is moving away, he says, from just passing the course to ensuring that users are competent and confident in using the system to do their jobs.

Campbell acknowledges that Cerner's traditional approach was to leave the

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responsibility for planning and delivering effective EHR training to the client, and only assist if asked. That strategy had its pitfalls, he says, because it often led to a less effective training experience, lower end-user adoption and consequently a poor perception of the vendor in the eyes of the end users. "What we have found is that, on a 5-point scale, the end users rate their satisfaction and the quality of training dramatically higher when they engage our Learning Services team up front and use our best practice approach throughout the project. Those who follow the model have significantly more success in their conversion and adoption efforts," he says. "It's our brand either way. To the end-users it's Cerner. We want to both achieve high end user satisfaction and protect our brand." To that end, going forward, Cerner intends to be much more prescriptive with their clients using their end-user training model for all HIT projects regardless if it is Cerner, the client, or a third-party delivers it.

Five principles

Today Cerner's 150 training professionals—physicians, nurses and others consistently base their approach on five core learning principles:

1. *Learning must be relevant.* Relevant to the organization and the learner. "We try to avoid training that does not provide any context. Why is this important to users, to the organization, to the patient?"
2. *People learn by doing.* Lower user satisfaction is linked to abstract or academic methods when it comes to the EHR. Campbell uses the analogy of a kid learning to ride a bike: "You put them on a bike and coach them. For healthcare professionals, learning to use our software to effectively do their jobs is very similar."
3. *Learning must be performance-based.* Training succeeds when trainees demonstrate competency. It's not just a matter of what they know about the system, rather, like Nike, it's just doing it. There needs to be a performance expectation that they prove they can meet.
4. *Learning occurs just-in-time.* Too often health systems look at the number of people they need to train and decide to start the process too early. The problem is that technology changes often and when training occurs too far in advance, retention drops to between 3 and 10 percent. It's preferable to train no more than three to four weeks prior to Go Live and then supplement it with coaching and refresher training afterward. "We use e-learning and learning labs to provide just-in-time prep for end users before, during, and after a conversion event," says Campbell.
5. *Learning occurs in real time.* "Less than 5 percent of our time is spent in formal education or training," he says. "Shouldn't we also be focusing on the 95 percent when learning is happening in real time, on the job?" Cerner has embedded into its EHR electronic-performance-support tools that allow nurses or dietitians, for example, to access 20 to 30-second "how-to" video clips, cue cards or concise task lists while using the EHR. Also, they provide on-the-ground coaches who offer end users one-on-one support

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Welcome to Michael Karpf, MD, Executive VP for Health Affairs, Tim Tarnowski, Associate VP/CIO and the UK HealthCare leadership team.

prior to Go Live, during Go Live, and in some cases, up to 60 days after Go Live.

"We believe strongly in e-learning," says Campbell, "and as a result the company has developed simulation tools that are customizable to each client's needs. We've learned that even the best simulation tool can't offer the opportunity to experiment and explore as well as a live system."

One of their latest developments is an e-learning tool that has all the support features of standard e-learning ("how-to" video clips, step-by-step guidance on completing specific tasks, etc.), but rather than practicing in a simulation of the EHR, the e-learning accesses a live EHR, giving end users the ability to experience and explore the real system. This e-learning can be accessed virtually for remote learning or via a learning lab that allows physicians to work at their own pace and yet still have someone close by for support.

According to Campbell, clients who use Cerner's e-learning achieved the same success rate on competency assessments in significantly less time than those who use a classroom-only approach. "Why force people through when you can still get individual support while training at your own pace?" he asks.

Learning Labs

Following the e-learning, physicians have access to learning labs where they can refresh what they have learned, go deeper in areas specific to their practice, and ask questions about the project in general. The Learning Lab is often set up near or even in physician lounges to provide convenient access. Providing learning support to nurses and other clinical roles is a little different. "You need to be more prescriptive with nurses," he says, because some health systems pay nurses overtime and some bring in agency nurses to backfill while they are training—it's not just on their own time. EHR training for nurses is scheduled like a class. However, only the first half hour or so needs to be run like a class. "This first 30 minutes is where we make certain everyone understands why their organization is implementing the system, and what will be changing in their daily workflow," says Campbell. Once the introduction is done, nurses can proceed at their own pace learning how to actually use the system by going through the e-learning described above. They are also supported by a coach who is there to assist. Because it is self-paced, they can leave when they complete the training and pass the competency assessment.

The physician-training spectrum

An important support element of building the capability of confidence of physicians still comes down to direct one-on-one assistance. For large physician practices, the EHR maker offers physician-adoption services built upon three key elements:

1. *Pre-conversion coverage*—two weeks prior to Go Live, several staff, including a physician leader, provide satellite support to the physician's office and also to the physician learning lab.
2. *Physician-conversion support services*—from Go Live to two weeks after, conversion support coaches are on the floor providing side-by-side assistance to physicians.
3. *Post-conversion physician support*—two weeks past to 60 days past Go

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Live a handful of physician coaches are available to help optimize doctors' use of the system. "In the initial training, most physicians learn just enough to get by. What we've found is two weeks is enough for the basics, but to optimize the experience and really get the value from the system, you need to have someone there to coach them up to two months after Go Live," he says.

Campbell places EHR training in a large context. "This is bigger than just training. It has to do with, one, motivation, and, two, ability. We don't spend enough time ensuring that clinicians and nurses *want* to use the system." He is leading development of a complete, end-to-end plan for EHR training that will incorporate strategies for increasing end-user motivation as well as ability. Tactics include messaging from peers, over-the-shoulder video clips, physicians talking to physicians over the network and rewards for participation. The end product will be a blend of growing both motivation and ability.

"Historically, some of our competitors have done a better job of requiring clients to follow their training regimen," he acknowledges. Surveys of Cerner's clients show a dramatic improvement in successful adoption of the EHR and satisfaction with training when clients deploy the supplier's training approach and used its experts. "The data is clear. When they don't use our approach, the results are inconsistent. Some clients do well; but many do not. In order to create a more effective outcome for all of our clients, we will be much more prescriptive. We can't just leave it to chance. We can't view this solely as a revenue-generating consulting opportunity. It's about a consistent, high-quality end-user learning experience, so they can help achieve their organization's goals of quality, safety and efficiency."

NewYork-Presbyterian

EMR training at NewYork-Presbyterian Hospital is predicated on the health system's overall goals and strategy, says Mary Beaudette, Director of COLE-Technology Learning Solutions. "The goal is to increase access to the EMR system and improve how the organization tracks and manages patient data," she says.

NewYork-Presbyterian
The University Hospital of Columbia and Cornell

Mary Beaudette, Director, COLE-Technology Learning Solutions, NewYork-Presbyterian Hospital

"A few years ago, we started looking at training from a quality, patient safety and revenue enhancement perspective which drives the training approach. So, it's very audience specific" and based on roles and situations. Because issues like medication reconciliation, pain management and processing times in the ED are huge areas of focus for NewYork-Presbyterian, they are also strongly emphasized in its EHR training.

In EHR training for nurses that perspective translates to "not just how to do it, but why and what the benefits are. Not just the mechanics of it, but also the conceptual piece of how they integrate it into their daily routine always including the

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benefits for users and the patient," notes Beaudette.

Each month a group of new nurses undergoes eight hours of EHR training that's structured as a day-in-the-life of a nurse, including shift change, review of vital patient information, procedures, medication administration and creating notes.

"It's really about the interdisciplinary plan of care—the whole chart. It's not just your individual charting and notes."

An early lesson learned was that clinicians were good at entering information into the system but not great at finding information charted by others. "Our training focus shifted to overall navigation and the understanding of a patients' complete story as documented in the EHR. It's really about the interdisciplinary plan of care—the whole chart. It's not just your individual charting and notes," she says.

Who will read what?

"When implementing the electronic record in our clinics, we emphasized the need to incorporate all aspects of the patient's medical history and communicate the plan of care with the current clinicians involved. The training and use of the dashboard was a major focus," says Beaudette. "It allows clinicians to see at a glance what was provided and what is due. It enables the nurses to manage the entire chart. The inpatient group had access to more complete information. So, if a patient was discharged, received instructions and then went to the clinic everyone is on the same page. It's being able to incorporate those concepts into the training and show hands-on how good care is delivered. In training, we don't get to take people through every situation, but we—in discussions with nursing informatics, education and physicians—identify the key situations or scenarios they want us to reinforce in training. We also try to identify those scenarios that allow us to navigate as much system functionality in one example as possible."

NewYork-Presbyterian integrates this approach into a blend of classroom training, online learning classes and paper-based job aids that are all pocket-sized so they can be carried in a lab-coat pocket. "No big binders," she says. Using a tool call Captivate, the hospital also creates online movies that allow record and play-back and insertion of instructional text. Virtual training sessions are also available, aimed primarily at physicians, who can log into a webinar live from their offices.

Beaudette's staff includes a manager and six instructors who help deliver EHR training to 18,000 employees at NewYork-Presbyterian's five in-patient facilities and numerous clinics. They use seven classrooms across the five campuses—each room with five-to-10 PCs. "We have monthly sessions for nurses, physicians and ancillary staff. Online courses are available 24/7 and aimed at teaching basic EHR navigation: How do I need to enter an order? How do I find a note? It's very task-based," says Beaudette, who estimates the total EHR training budget amounts to $1,000,000 including salaries.

Online movies using Captivate software allow flexibility for a changing EHR. Development of a new clinical-note function, for example, will prompt the team to send out an email announcement about new screens and to develop a movie that goes on the NewYork-Presbyterian

intranet. "People often prefer to watch movies instead of other media. Also, with movies, you can continually change them to reflect system upgrades," she says. The movies—called interactive learning—capture EHR screens and every mouse click a user makes in ordering Heparin for a patient, for example. "It's our version of online help."

Training thousands in only weeks

More conventional online courses educate users on what's new and different using the EHR, best practices they need to follow and provide a user-assessment exercise. If users score less than 80% on the one-hour training, they are required to attend a one-hour learning lab. The combination of approaches allowed Beaudette's team to train 7,000 people at NewYork-Presbyterian-Columbia campus in only three weeks and then 5,000 people at the NewYork-Presbyterian-Cornell and Westchester campuses in two weeks.

The health system also uses outside staff resources for the arrival of new residents in June or major Go Lives that require training the entire clinical organization. While the IT department finances the cost of outside resources, Beaudette and her team manage their schedules. "I don't have capital money. It's centrally managed and that makes it easier," she says, because it helps better manage the integration of vendor relationships.

During busy times in-house nurses are sometimes called upon as Super Users, which enhances their skills as well. "We're not big fans of Super Users during Go Live because we don't want to take clinicians away from their patients," says Beaudette.

Because the EHR—NewYork-Presbyterian uses Eclipsys everywhere except for its Cornell clinics, which uses Epic—is fully functioning in five inpatient facilities and a majority of Columbia clinics, training is now moving to specialized projects, such as bar-code scanners for medication administration, moving the Pharmacy department to Eclipsys and ongoing enhancements to the EHR.

The health system measures EHR-training effectiveness in several ways. Six months after onboarding new nurses, for example, the VP of HR and the director of nursing education host a breakfast for them and discuss how the training went using a set of pre-written questions. Also, each Friday is dubbed Patient Safety Friday: when managers and executives do a "trace" or walk of hospital units with a set of questions that sometimes involve EHR demonstrations.

Conclusion

EHR training at its best is driven by the strategic goals of the integrated health system. By occupying the intersection of the iconic triad of people, processes and technology in healthcare, EHR training acts as the lynchpin for the achievement of quality, safety and efficiency in accountable care. Best practices in EHR training involve more than the mechanics of software functionality, they place a premium on context and situational awareness of the users. In that sense, EHR training is hand-in-glove with best practices in evidence-based medicine.

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