Plugging in Physician Practices: Software Implementation Offers Insights on EHRs, Community Networking

by Dianne Koval, RHIA, CPEHR

A pioneering data exchange network shares lessons from its practice management software implementations-a first step in bringing physician offices online.

Mark Foster, MD, waits for his Hudson Valley Primary Care staff to locate the medical record of his next patient. The Wappingers Falls, NY, practice won't wait for paper much longer. In 2006 it began migrating to an electronic health record (EHR) system. A first step was implementing a practice management system (PMS) component.

Foster's practice and others in the regional physician network are generating valuable lessons in implementing advanced PMS software. Their experiences are also providing a look into the steps that will follow-implementing full EHR systems and bringing physician offices into community health IT networks.

The THINC Network

Foster is one of the lead physicians involved in the Taconic Health Information Network and Community (THINC), an initiative to assist physicians with implementing EHRs. As part of THINC, not only will Foster's practice have a certified EHR, his system will be integrated with other stakeholders throughout the THINC healthcare community.

THINC is one of the nation's leading health information exchange projects, created by the Taconic regional independent physician association in the Hudson Valley region of New York.[1] Over the past five years, THINC has expanded the network, bringing together competing healthcare stakeholders including physicians, payers, community hospitals, reference laboratories, pharmacies, consumers, and technology vendors.

Currently, the data exchange contains clinical information from hospitals and laboratories. The next phase is to convert physician offices like Foster's from paper records to certified electronic health records, enabling them to connect to the data exchange. Bringing physicians into the network will add immense value to the data exchange because of the volume of care that occurs at physician offices.

Step 1: Practice Management Software

Physician practices in the THINC region range from solo practitioners to multispecialty, multilocation practices with more than 100 providers. The region represents the typical small- to medium-sized physician practices, with an average of four providers per practice. The EHR implementations at THINC are happening in stages because of the wide range of practice types and health IT experience.

THINC learned early on not to underestimate the difficulty of deploying health IT in physician offices; it is a radical change with an impact on each office function. THINC's first step was to contract out EHR implementation services to a vendor specializing in physician office health IT adoption.

The vendor is charged with providing the technology hub for the current data exchange along with services to achieve health IT adoption in physician offices. Services include workflow analysis, implementation, training, and technology support in the health data exchange and for PMS and EHR support.

The physician project began with a focus on electronic records only, but it was soon decided that the future market would employ systems with integrated-not interfaced-PMS and EHR systems. THINC's goal was an EHR that would serve practices well into the future. Many of the offices had old versions and incomplete modules of their PMS software (e.g., lacking reporting or interface capability). Interfacing the old software could be a potentially risky and expensive move.

The THINC network requires CCHIT-certified systems, and vendors must be willing to work with THINC's quality committee on voluntary reporting functionality. Physicians in the network can choose from among the vendors that have a contract with the network, each of which offers integrated PMS-EHR systems. In some of the highly integrated systems, the data tables that the physician group builds for its PMS component will also be used for its EHR system.

PMS implementation requires some specialized knowledge, including an understanding of physician office billing and clearinghouses. A good understanding of the practice's patient flow and scheduling needs also is important. For instance, once the first practices started training on the new systems, many realized they had created scheduling rules that did not reflect the way they truly see patients. Many of the primary care practices set up restricted schedules (i.e., restricting certain appointment types to certain slots), for example, when in practice they had open scheduling.

The initial implementations are completing a picture of the many practice characteristics that influence implementation success: practice size; the state of existing hardware and networking infrastructure; type of existing PMS software; the quality of the data entered into the previous PMS software; the clearinghouse selected by the practice; the effectiveness of current work processes; the management style of the physician leaders; and the attitude of the staff. Combined with the effectiveness of the implementation plan, each of these practice characteristics plays a part in the degree of implementation success.

Planning and Hardware Assessment

At the heart of an ambitious implementation such as THINC's is a master project plan to track all tasks, task timelines, and the people responsible for them. THINC begins with a baseline project plan that is modified to meet the needs of each particular practice. The implementation team works to constantly standardize the process as much as possible to control for variability in practice types.

The project plan identifies individuals on the project team, including project managers, implementation specialists and trainers, and the individuals in the practice who will be involved in the project (e.g., lead physician, lead billing, super user). It identifies milestones and milestone dates. Planning encompasses any ancillary modules that will be brought live with the PMS, such as scanning. It identifies any supplies needed for the new system, such as new forms, special paper (e.g., as required for e-prescribing in NY), and special toner cartridges for new equipment such as printers and scanners.

The implementation teams learned to be obsessive about coordinating activities. Third-party companies are responsible for acquiring the actual hardware, and these purchases must be closely coordinated with the implementation team. If the hardware doesn't arrive on time, training can't begin-a show stopper. Third parties also provide the application hosting, which must be coordinated with the implementation and hardware teams. The sales team must coordinate the set-ups for patient statements and clearinghouse with the implementation team and the practice. All activities must adhere to the project plan, which serves as the project's glue.

Implementation must coordinate the technology, networking, and connectivity the practice will need. An initial technology assessment details the hardware requirements. A network outage process requires a double ISP connection with two different ISP providers in each office. All existing or planned hardware is checked for compatibility with the vendor application; all practices must follow a list of approved hardware and networking equipment. Printers have proven more problematic than any other piece of equipment. They need to be able to print a variety of forms and work in a networked environment.

Differences between the approved hardware and networking set-ups in the application service provider model had very little impact on the success of the implementation. The practices experienced faster response times by accessing information online than with their own PMS client-server software.

Prior to launch, the THINC implementation team configures and tests both hardware and network. The team is on hand to closely monitor offices as they go live, watching performance on the database servers, making sure printers are working appropriately, and looking for glitches on the hardware side.

Table Building and Data Conversion

Some standard database tables can be shared among the groups. Once built, they are configured slightly for each subsequent adopter, which saves significant time. For example, data on all of the Hudson Valley physicians have been entered into a table, so new practices implementing a PMS just adopt and verify the enterprise table, not recreate it. Other enterprise tables include zip codes and pharmacies.

The difficulty, as might be expected, is getting consensus when two groups want the tables set up different ways. That requires a process for negotiating a final decision. THINC has been able to work out consensus, and groups have been very considerate of each other. The network coordinates decisions among the groups and implements based on best-practice methods, which may require that groups change to workflows intended to ultimately benefit them. A prelaunch database review ensures that all set-ups are configured properly.

Security roles, access rights, and user groups are configured during table building. Once the system is live, roles and access configurations are often refined as users find they need more or less access to various parts of the software.

Since many of the practices had existing PMS software in place, THINC created a process for getting a practice's data out of its existing system and into its new one. Among the first steps is deciding what data will be converted (e.g., demographic, insurance, appointments, financial) and how far back to go (typically three years in THINC).

Former PMS vendors have ranged from cooperative to uncooperative when it came to extracting existing data. One uncooperative vendor threatened to shut down the PMS software of one practice if it moved to the EHR vendor.

THINC programmers working with the implementation team developed a SWAT-like plan for data extraction by examining file structures, diagramming database configurations, and even locating previous employees of the PMS vendors to determine the location of specific components of demographic and administrative data requiring extraction. The approach proved successful, and data were smoothly transferred into the new PMS component.

The implementation team uploads the extractions, and the practice reviews the data. Often there is some tweaking required, either mapping information to the new system tables or correcting data that were corrupt from the old system. One pediatric office had codes in the date-of-birth field, and the birth year for all the babies came through as 1950 (an error quickly identified and corrected).

The final upload of data is performed after data review and shortly before go-live. Any information changed between final upload and go-live is tracked, often by simply writing down the changes.

Claims and Clearinghouse

Practices implementing a PMS for the first time must select a clearinghouse; those switching from an old to a new PMS vendor must complete administrative paperwork with each payer. This is a red-flag area because requests to payers must be made in very specific ways. For example, the form may have to be notarized, the notification printed on letterhead, or a specific color ink used. If there is incomplete, inaccurate, or delayed information, the practice cannot submit claims until the error is corrected.

One of the THINC practices did hit this stumbling block. An overlooked item in the physician ID file left the practice without the ability to submit claims for that particular physician for three weeks.

Two payers in New York State allow submission from only one PMS vendor at any point in time. This limitation makes the billing process difficult for the practice during the switch. The two payers would not make an exception for a practice that had administrative paperwork delays, and the practice was left with a hold on claim submissions for three weeks.

Claims are tested as much as possible in advance of launching the new PMS system; however, THINC found that some clearinghouses can't test all components until go-live, another red-flag area.

Workflow and Culture

Going into the implementation, some practices had effective workflows. Others had inefficient work processes, largely due to the limitations of their current PMS application and workflows designed for paper-based records. The new implementation involved changing workflow for both front- and back-office functions.

Changing the day-to-day workflow of an office is a major undertaking. Good planning is essential, but the PMS implementations also illustrate the importance of office culture, staff attitude, and physician leadership. Practices that were focused on the ultimate goal of a paperless office and what it means to each of them were better equipped to handle the inevitable frustrations they encountered.

Staff at Hudson Valley Primary Care, for example, understood that change was going to be difficult, but they also understood the ultimate goal and benefits. Staff knew the path to their future EHR required a new PMS system as a first step. The practice had a very successful PMS conversion mainly because of this attitude and the staff's ability to work effectively with the implementation team. Across the initial implementations, staff attitude ranged from acceptance that the practice was moving toward implementation to resistance to all change.

The management style of physician leaders also varied across practices. Some leaders were participative, while others were authoritative. Some physician leaders wanted to be heavily involved in the process, and others wanted the implementation team to manage the process.

The more successful implementations had participative leadership, where the physicians continually monitored and supported staff through the change. In addition, they regularly monitored to ensure that staff were not feeling frustrated by any part of the process. In the most successful implementations, physicians attempted to relieve or reduce frustration as much as possible. In addition, the physician leader was able to recognize an obstacle, adjust direction when it arose, and take corrective action quickly. Reinforcing the ultimate goal of the project and the future advantages of the EHR increased the chances of implementation success.

In the End, Communication First

One of the most important lessons learned as THINC's initial PMS implementations went forward was to set expectations early and discuss them often. The implementation team made many adjustments to the project plan to incorporate "expectation setting" so that the implementation team, the vendors, and the practice each clearly understood what was to be achieved and when.

Discussing new workflow and its implication for both staffing and staff skills also proved very important. Some of the practices implemented best practices that they later found they could not support. For example, moving charge entry to checkout requires that the practice have sufficient staff with appropriate knowledge of charges and coding.

Similarly, gauging the staff's capacity to learn the new software also proved essential. Some of the practices migrated from very basic PMS systems, and turning on the full functionality of the sophisticated new PMS would have been overwhelming and overly time consuming.

THINC's early experiences reinforce the difficulty in changing the way a practice functions. Looking down the road, regional patient data-sharing efforts will need to carefully evaluate the knowledge level and experience of their implementation teams and the ability of the project managers to successfully transition practices. They will need to thoroughly evaluate a practice's ability and willingness to make the leap to electronic records.

In the meantime, practices like Hudson Valley Primary Care are pioneering the way for smaller physician offices to both digitize their practices and connect to the larger community-wide data exchange.

Note

1. For more on THINC, see Koval, Dianne. "Real-World RHIO." *Journal of AHIMA* 76, no. 3 (March 2005): 44–48.

Dianne Koval *(dkoval@medallies.com) is director of physician services at MedAllies in Fishkill, NY.*

Article citation:
Koval, Dianne. "Plugging in Physician Practices: Software Implementation Offers Insights on EHRs, Community Networking." *Journal of AHIMA* 78, no.3 (March 2007): 50-54.