HealthData Management

July 1, 2011

6 Ways to Stretch I.T. Investments

By Gary Baldwin

In an era of rising costs and decreasing reimbursements, health care I.T. leaders need to get the most bang for the buck out of their investments. Information technology holds plenty of potential for increased efficiency to be sure. But merely deploying a system-even one that qualifies for meaningful use dollars-is rarely enough. Here, hospitals, group practices and I.T. consultants share hard-earned advice about how they maximized the value of their systems.

Tip #1: Reinvest the Dividends

When Ed Ricks became CIO at Beaufort (S.C.) Memorial Hospital in summer 2008, he was charged with implementing computerized physician order entry across the enterprise. But he faced two serious problems. The 197-bed community hospital had been running a core information system, from Meditech, for some 20 years, and the legacy CPOE capabilities-lack of drop-down menus, no embedded decision support, etc.-were limited by today's standards. "Physicians would not use it," Ricks recalls. "It did not help their workflow."

And beyond the inpatient setting, Ricks faced another challenge. The hospital's emergency department, which had been running on the legacy system as well, was missing revenue opportunities left and right, Ricks says. It too was in need of a system upgrade, and after completing his analysis of the situation, Ricks laid out a game plan that could address both areas.

He figured his best bet was to automate the ED first, and set the stage for improved charge capture. Then, the enhanced revenue could help defray the cost of a new inpatient system. "It was either a brilliant strategy, or just another hare-brained idea," he says.

Turns out the former was the case. In June 2009, Beaufort Memorial inked two contracts-one was for a new ED system, from MedHost, which represented about a $500,000 outlay in software, hardware and implementation costs.

The other was for an upgraded version of Meditech, a far more expensive proposition-one that came to about $3.5 million, including infrastructure work needed to support the system, Ricks reckons. The MedHost system went in quickly, going live in December 2009. The Meditech overhaul was completed this past March.

But thanks to Ricks' insights about ED billing, the hospital has been able to absorb much of the financial impact of the new Meditech system due to increased revenue. As a result of the MedHost system, Beaufort has tallied a $2 million net revenue gain in the ED alone, Ricks says, an amount which equates to 1.25 percent of the hospital's annual operating margin. Generated from better charge capture, the increased ED revenue, Ricks says, was not a huge surprise. He had deployed a MedHost system for a previous hospital, and had seen similar gains. The improved revenue stems primarily from better evaluation and management (E&M) service coding-which was driven by improved documentation-and better capture of IV infusion charges. The MedHost system, which is driven by touch-screen monitors that nurses find easy to use, facilitates capture of the start and stop times for infusions, Ricks says. "Overall, we have had an uptick of about $50 net revenue per patient," he says. "It may not sound like a lot, but with 40,000 annual ED visits, it adds up."

Meditech remains as the hospital's core clinical and financial information system. The MedHost system is interfaced to Meditech, which processes orders and then posts results back to MedHost.

The upgraded Meditech suite is far more user friendly than its legacy predecessor, Ricks says. He says that by the end of summer, all physicians will be on CPOE. To further maximize the utility of the Meditech system, Beaufort has convened a clinical documentation workgroup that is examining the terminology used by physicians as they document patient encounters electronically.

The goal, Ricks says, is to accurately portray physician work while setting the stage for improved billing that accurately reflects the work completed. "We want to better reflect the level of patient acuity," he says.

Tip #2: Use What You Have

Making the most of I.T. investments doesn't always entail replacing or updating systems. Some hospitals have found new ways to make use of long-standing technology with only minimal, if any, investment. That was the approach taken by Dan Martinez, director of patient financial services at Mission Hospital, a 400-bed facility located in Mission Viejo, Calif. It's a busy facility, filing some 180,000 annual claims to a number of payers, including Blue Shield of California.

Like many providers, Mission Hospital faced a growing problem with claims denials. In 2009, for example, the hospital sent about 12,000 claims to Blue Shield-the hospital's second largest payer, one reimbursing under a managed care contract. About 20 percent of the claims were denied on the first pass, Martinez says. "Other payers have similar denial rates," he notes.

Blue Shield, however, initiated a program seeking to reduce the number of denials and to streamline its overall business relationships with hospitals. Dubbed "Poet" (for Partnership in Operational Excellence and Transparency), the voluntary program includes some 150 hospitals. Martinez jumped on the opportunity to join. "The relationship between providers and payers is one of great contention," he says. "The program was the first time I ever saw hard data from a payer showing how claims were processed."

Blue Shield gave Martinez free access to a database of claims that is maintained by MedeAnalytics, a business intelligence vendor. All that was required was a browser and a password. The database revealed claims details, such as number of claims submitted, types of claims denied, and how the denial rate stacked up month-by-month.

Using the data, Martinez could analyze the claims by service line, and identify the source of the problematic claims. He can drill down to the individual claim if need be. Then, on a quarterly basis, Martinez met with representatives from the payer to discuss his findings and ways to streamline the claims process.

Those face-to-face meetings yielded some small, but productive, changes, Martinez says. Using the database, Martinez noted that about 10 to 15 percent of the hospital's claims were being filed via paper. Drilling down, he noted that 80 percent of the paper claims involved attachments, or supporting documentation, and furthermore, the claims often were subject to lengthy delays. The paper claims, Martinez found out, were often for services covered in carve-outs, or specialized services not covered under its managed care contract payment arrangements that required voluminous documentation. And the claims were often huge not only in terms of paper volume but price tag-some represented nearly $300,000 in billable charges, Martinez notes.

The solution: Mission would send in claims via electronic fax, rather than by mail. That would simplify delivery of the package on Mission's end, and provide the payer with an electronic snapshot of the documents in play, rather than a pile of paper.

Furthermore, the electronic fax was capability Mission already had built in to its workstations. Billing personnel make photocopies of the file, and then send the captured image to their desktops and download what is needed into the e-fax tool. As a result, Martinez says, sending in paper claims is far less labor intensive-and saves on postage to boot. "We're not paying the post office $20 to deliver a huge claim," he notes.

The meetings with Blue Shield revealed other problems as well. For example, in analyzing the data, Martinez noted that many claims being "denied" on the first pass were actually claims that the payer simply had to reprocess, due to additional charges being added to the file by Mission's billers after the first claim had been submitted. The denial messages subsequently dispatched by Blue Shield back to the hospital confused the staff at Mission. "They would trigger a lot of rework on our part," Martinez says. "Blue Shield had to take a lot of phone calls from us. Both of us were spinning our wheels."

Now, the electronic remittance advice comes back as a unique message, indicating the file is being reworked, not just as a blanket denial. In essence, Mission and Blue Shield are using commonly understood terminology to describe claims status. To sort the claims out, Martinez tasked a system analyst with the job of writing a scripting program to differentiate the messages returned in the electronic admittance advice. "It's easier to identify accounts that have been truly denied," Martinez says.

Overall, the Poet program has paid off, Martinez says, with a substantial decrease in denied claims and improvements in payment turnaround time. And both improvements came during a period in which the number of claims Mission sent to Blue Shield increased dramatically: in 2009, Mission dispatched 12,000 claims and in 2010, the number grew to 16,000.

In fiscal 2009, Mission had $9.2 million in claims denied by Blue Shield. One year later, it had trimmed that to $4.5 million, knocking the proportion of denied claims down from 20 percent to just under 10 percent (Mission estimates in fiscal 2011 that 7.2 percent of its Blue Shield claims will be denied). And the turnaround on paper claims has been reduced up to 45 days on larger claims, Martinez says. Part of that came from face-to-face discussions in which Blue Shield clarified that, for some claims, it needed far less documentation than Mission was sending. "We would send a pile, but all they needed was three pieces of paper," Martinez says. "So we reworked the process."

Tip #3: Revamp the Workflow

In April 2010, Canyon Park Clinic opened its new office in Seattle, providing a very different home for the multi-specialty group practice. From a design perspective, the 30,000-square foot office had little in common with its predecessor. "The older clinic had been built around the physicians," recalls Brett Daniel, M.D., the family physician who serves as medical director for the 37-member group. "They had individual offices with windows. We created better work areas and combined offices."

The hallmark of the new design would be improved patient flow, Daniel says. The physicians wanted to make way-finding easier, but also wanted to free up staff time escorting patients around the complex. The group also wanted to free up space for revenue-generating activity, such as imaging and lab work.

But to accomplish these goals, Daniel says, the clinic needed a way to easily track patient, staff and equipment location. That's why, early in the design phase of the clinic, the group opted to add a real-time tracking system into the mix.

The system, from Versus Technology, freed up the creation of the floor plan. "We have narrow hallways and we did not want the medical assistants to go get patients," he says. "We wanted the medical assistants out in the work areas so physicians knew where they are."

When patients come for appointments, they are given a badge with a small radio frequency identification chip. The admissions clerk downloads demographic and other identifying information onto the chip about the patient from the group's practice management system, from GE, via an infrared scanner.

The chip is activated when it receives a signal from one of multiple ceiling-mounted transmission devices as they walk around the clinic. The signal in turn feeds information about the patient location into the Versus system, which displays it graphically on workstations around the office. In addition, the system keeps tabs on patient movement from station to station, generating data about the duration of the visit.

Physicians and other clinical personnel sport badges as well, enabling other staff to pinpoint their location on the Versus tracking board. Or if a patient calls, it is easy for the front desk to know if a medical assistant is available to discuss their issue. "Patients appreciate it because we get answers faster," Daniel says.

The practice is on target of meeting a five-year goal of doubling its revenue in the new clinic, Daniel says.

In addition, the practice has streamlined its flow of patients, with the total door-to-door visit time now averaging about 45 minutes, compared with nearly 90 minutes in the old facility.

One unexpected benefit to the tracking technology was a quieter work environment, Daniel says. "There is not a lot of staff in the hallway," he says. "I had no clue how quiet and peaceful it would make the clinic."

Tip #4: Consolidate the Platform

One of the oldest debates in health I.T. circles is best-of-breed versus single source. For his part, Albert Goldszal

says that when it comes to imaging systems, the fewer vendors in play, the better. Goldszal is CIO of University Radiology Group, East Brunswick, N.J. The group includes 82 radiologists, including eight who live and work in Israel, seven time zones ahead. Having physicians in Israel-who review films via a teleradiology connection-greatly expands the group's ability to offer round-the-clock reading services to hospitals, Goldszal explains. In total, the practice performs some 925,000 procedures, in all imaging modalities, annually.

And the far-flung workforce is just one more reason the CIO has been consolidating his technology platform, standardizing the group on Fuji software for both reading films and storing them in a picture archive. Goldszal is currently replacing specialty viewing stations for mammography and 3-D images, such as ultrasound, that are provided by several other vendors, opting instead for Fuji across the board. "There will be fewer servers to support and we are reducing the cost of maintaining multiple software packages," he says.

According to Goldszal, the practice spends about $1 million annually in image management costs, including workstations, archive maintenance, and personnel.

By consolidating, he expects to reduce costs nearly 20 percent, or $200,000 annually. The consolidation will be done early next year, he adds. Once it is complete, physicians will be able to perform all readings from a single workstation, rather than having to switch viewing stations for 3-D images. System upgrades will be much easier, and his I.T. staff will have fewer interfaces to contend with. "We will have better productivity," the CIO says. "We will no longer have to train physicians in multiple applications."

Tip #5: Make Good Use of Add-On Technology

Sometimes a single-vendor approach to I.T. is not feasible. That's the case with Elmhurst (Ill.) Clinic, a 120-physician, multi-specialty group practice near Chicago.

The group has been live on an ambulatory EHR, from NextGen, since 2005, a move that was all but mandated by a need to communicate efficiently across multiple sites, says Mary Stull, R.N., vice president and chief operating officer. The EHR houses the entire patient record, including history and physical, lab results (via interface), and it also imports in-patient documents from nearby Elmhurst Memorial Hospital.

The EHR has set the stage for improved clinical decision-making, Stull says. "The EHR has enabled rapid growth," she explains, noting that the practice has grown by nearly a third without adding extra support staff. In addition, the practice has eliminated some positions that were linked to the paper chart. "We save half a million dollars in annual labor cost," says Stull.

But the EHR alone is not enough to catapult the practice into the modern era of accountable care.

In 2007, the practice added on-site kiosks, from NCR, that enable patients to self-register for appointments. The kiosks are interfaced to the EHR, which has a parallel practice management system built in. Patients can update their insurance and other demographic information, without announcing the changes at the front desk. And with 300,000 annual visits, the kiosks have helped streamline front desk operations, Stull says. "About 60 percent of the patients use the kiosk to check in," she says.

In addition, the practice has added patient management technology, from Phytel, to its mix. The Phytel system scans the EHR/PMS database for patients overdue for visits.

The software considers diagnosis coupled with the recommended duration between visits. The practice can set the guidelines for patient visits, Stull adds. At Elmhurst, 16 of 17 clinical specialty departments (surgery being the sole exception) use the system to manage follow-up visits. The Phytel software scans first by diagnosis, then scans for the last available record, and finally looks for the next appointment booked.

If too much elapsed time is revealed, the system will trigger an automatic phone call to the patient and also alert caregivers. "We could pull the data from the EHR ourselves, but it would be labor intensive and would not include the auto-dial," says Claudia Webb, director of business operations. The set-up has enabled the practice to substantially increase follow-up visits for chronic care patients, such as diabetics, Stull says.

The Phytel system can also generate clinical reports that suggest gaps in care. If a patient books an appointment for a cold, but is also a diabetic overdue for a foot exam, the report will highlight the missing service, alerting case managers in advance of the appointment.

As a result of the documented care coordination, Elmhurst Clinic has been designated by the National Committee for

Quality Assurance as a Level 3 Medical Home. The medical home is an emerging delivery model in which a group practice acts as the central coordinator of primary care, functioning as the patient's "home" or central point of contact for services.

The model is highly dependent on the EHR and shared communications among providers. Level 3 is the highest level of the medical home index and indicates achievement of the most comprehensive level of the continuum of care. "We try to use technology to improve the patient experience," Stull says.

The EHR also makes life easier on the clinical staff as well. The practice uses the EHR to auto-populate a two-page school physical form required by the state. Nurses no longer have to manually complete the form, a task that once took about 10 minutes to complete.

Tip #6: Spend as a Team, and Spend Intelligently

Providers can get more value for their I.T. dollars long before even buying the software by negotiating prices going in and carefully scrutinizing their ongoing maintenance costs, says Jeff Muscarella, executive vice president of I.T. at NPI, an Atlanta-based consulting firm that specializes in advising on technology purchases. "Hospitals overspend on I.T.," says Muscarella. "Everyone does."

The two main factors, he explains, are one, buying more technology than needed, and two, not getting the best price going in. "Hospitals often buy more licenses and functionality than they can use, or implement," he says. "Or they implement the technology, but getting clinicians to use the software becomes an issue."

The answer? A cross-functional buying team is the first line of defense, Muscarella says. He cites the example of a recent client which had recently signed a deal for a new system without the I.T. department even knowing. They found out later that the department was ill-equipped to handle the installation. Muscarella says any I.T. purchase six figures or higher could benefit from having multiple departments weigh in before signing on the dotted line. "Some radiology departments become their own world," he observes. "But physicians, administration, I.T. and finance should come together to make intelligent decisions."

And even with a cross-departmental buying team in place, getting the best price from a vendor is a challenge, he adds. "A lack of transparency on pricing is the culprit," he contends. "The cards are stacked in the vendor's hands. It is not like buying a house. You can't look up the average cost."

NPI maintains a database of deals, derived from its cross-industry database of nearly 14,000 I.T. transactions, Muscarella says. The database helps with costs comparisons, Muscarella says, but it's just a beginning. "Don't assume three quotes are enough. Vendors compete against each other and they know where their competition will come in. So it doesn't mean the quoted price is at rock bottom."

Muscarella decries the abundance of "confidentially clauses" many vendors write into their software contracts. The clauses prohibit the customer from disclosing what they paid. "The clauses are there to protect the vendor and nobody else," Muscarella says. "Hospitals should scrutinize the contracts and push back. The clauses are taking away from their ability to be an educated buyer."

He also advises providers to look closely at embedded maintenance agreements. Often set as a percentage of the purchase price, maintenance agreements can wind up doubling the cost of the system within five or six years, he says. Also, be on the lookout for maintenance clauses with increases tied to the consumer price index. "Inflation may be going up for heating oil, but it doesn't include EHR purchases," he says. "It's a 'gimme' for vendors."