Small Practices/Big Changes:
Lessons from EHR Adoption in Tulare County

The SPeD Approach

Small and rural primary care practices are the cornerstone of effective health care across much of California, yet they are under tremendous economic pressure as they struggle to maintain financially sustainable practices while improving patient care and enhancing satisfaction for themselves, their staff, and their patients. Electronic practice management and health record systems can help accomplish these goals, but many small practices lack the resources and technical expertise to effectively implement them. As a result, the adoption rate for these systems remains low.

To help primary care practices successfully implement electronic systems, the Small Practice eDesign (SPeD) initiative was created to offer a support structure and tools for integrating technology into the workplace and improving clinical care.

What makes the program unique is its community-based approach that links each practice with a local physician-trusted intermediary organization to provide ongoing support in implementing their IT systems. Another distinctive feature is its dual focus on both revenue management technology and health records to ensure that physicians manage the change process effectively, adopt new practice workflows, and generate financial stability through improved billing and collection processes.

Other key aspects of the SPeD approach include:

- Selection of best-of-breed, hosted revenue cycle management (athenahealth) and electronic health record (eClinicalWorks) systems, along with standardized contract terms and conditions.

- Standardized hardware/software bundle in partnership with Dell to lower purchase and installation costs.

- Technical support, training, and project management provided by a trusted, local intermediary.

- Monthly learning programs to support not only IT adoption, but also practice transformation and data-driven quality improvement.

- Financial assistance in the form of incentive payments and access to low-interest loans.

- "Hub-and-spoke" data exchange infrastructure to allow more efficient transfer of health information.

- Strong focus on patient health and provider satisfaction.

For more detailed information about the Small Practice eDesign model, see www.chcf.org.

edesign ● Small Practice

EVALUATION SUMMARY

Tulare County Pilot

The SPeD approach was pilot tested in seven primary care practices in rural Tulare County, California, beginning in 2009. Tulare is one of the poorest counties in the nation and a designated primary care shortage area. It has some of the highest obesity and diabetes rates in the state. The pilot practices received onsite coaching and support from a small team of technical and clinical consultants, as well as interactive training via monthly learning community sessions.

The Foundation for Medical Care of Tulare and Kings Counties (TKFMC) had the critical role of organizing and directly supporting the practices. TKFMC is a network of local health care providers organized for preferred provider organization contracting with health plans; it acts as a third-party administrator for self-funded health benefit plans, and includes the local medical society. The organization and its leaders have a longstanding relationship with the medical providers in the community. Additional technical support was provided by the Massachusetts eHealth Collaborative, ECG Management Consultants, several independent consultants, and California HealthCare Foundation staff.

To assess the effectiveness of the pilot, a mixed method evaluation was conducted by Susan Eliot and a team from Oregon Health and Science University. Following are some highlights of their evaluation report, organized around key questions.

How successful were practices in applying and using the technology?

All the practices had become fully EHR-enabled by the end of the pilot, and most of their patients perceived improvement. Although the practices were successful in using the technology, they defined success in different ways. As part of the pilot project, each practice identified its own goals, which placed differing emphasis on objectives such as: efficiency, revenue, clinical quality, work/life balance, and other measures.

Many efficiencies were noted in such areas as: receiving lab results, medication refill handling, telephone operations, billing, referrals, and access to data. These changes did not translate into overall time savings for most practices, and did not immediately result in increased income. Several doctors, however, felt there was potential for income to increase over time as they now had the ability to catch charges missed by their previous systems and the opportunity to address previously unidentified inadequate reimbursements.

How were clinical workflow and productivity affected?

Initially, practices experienced workflow challenges during the transfer of patient records from paper or from an earlier EHR application. But once the majority of established patients had at least one visit on the new system, record transfer was less of a burden and most physicians decided that a complete transfer was unnecessary. In many cases, there were time-consuming and unexpected interruptions such as system freezes, down-time due to installment of upgrades and patches, and low internet bandwidth in the area. Although these difficulties were annoying, the responsiveness and timely technical support of the local intermediary went far in minimizing the impact of the various disruptions.

Better and timelier patient information made visits smoother and more effective, which translated into greater satisfaction for physicians, staff, and patients. It also contributed to more efficient handling of office processes such as medication refills and lab reports. The availability of data after-hours and on weekends also added to workflow effectiveness.

Physicians' responsibilities increased and staff responsibilities decreased initially as the systems shifted many subtasks involved in coding, billing, and prescribing to the doctor. Some physicians said they didn't mind the extra duties because they felt it increased accuracy, chart completion, and possibly revenue (due to more

appropriate coding). Some also began to delegate various tasks back to their office staff.

Several of the physicians spoke about improvements in billing compared to their old system. One doctor surmised that considerable revenue may have been lost under the old system due to unrecognized errors that are now routinely identified. He noted that his practice's potential to generate increased revenue through better billing was one of the best things that had happened to the practice. Instead of waiting days or weeks for an outside billing source to produce a financial report, he said, they knew at the end of each day the level of income they had generated: "I like the immediacy of it," he said. It's "contemporaneous."

Improved and complete records were another widely noted benefit observed by some of the physicians. "We have better documentation now," said one doctor. "Before, there were a lot of slips of paper around." He also looks forward to the time when they have enough data entered into the system to extract and use it to improve patient care—for example to see who needs to come in for a mammogram.

Some physicians surmised that the process improvements may have been counterbalanced by lower numbers of patients seen during the study period. For doctors who see around 25 patients a day, the new technology did not significantly impact productivity. Most of those accustomed to seeing 40 or more patients a day, however, found they could no longer maintain the same high-volume pace or realize the same level of income. One high-volume practice, for example, is seeing only about 60% of its former patient load approximately 12 months after implementation. A pediatrician, however, was able to resume his high volume within nine months by developing customized templates for each common childhood ailment.

Some offices operate more smoothly because staff has learned to perform several duties and cross-train in each other's functions. They are no longer "compartmentalized" as one doctor described, with individualized duties only they can do. Medical assistants have also become more useful to some doctors. "When the patient comes in, right away my MA comes in, takes the chief complaint and types it in and lets me know the vital signs—that's all within the patient chart before I go into the room," said one doctor.

Practices responded in very different ways to the implementation of technologies and the reorganization of workflows. In some cases, staff responsibilities were reworked to better reflect the movement of information. In many cases, new efficiencies were realized, while in a few, well-established and efficient paper-based workflows were badly disrupted with significant loss in productivity. Three of the 15 physicians participating in SPeD said they would return to a paper-based system if they could.

How did providers and patients experience change?

Patient-doctor relationships were generally enhanced. Although some physicians continued to worry about decreased eye contact with their patients, most patients were not troubled by the presence of technology in the exam room. Instead several patients cited the benefits of the doctor having better access to their information. Patients also appreciated the simplicity and convenience of e-prescribing to their local pharmacy. Physicians also described patients who are now more engaged in their care. One doctor said: "They're participating in the whole thing—I'm sitting next to them with my laptop in my lap, I'm showing them labs, showing them x-rays." Doctors also like to print out visit summaries, medication lists, and laboratory reports to share with patients as they leave.

Physicians were able to shift some of their work away from the office as they gained access to patient data

from home or other remote locations. The doctors have welcomed this change, although it does not necessarily reduce their working hours. One physician said: "I can access the system anywhere on my iPad or my iPhone. I carry my iPad everywhere. I can go down to my boat on the Delta with it. I use it in the car while my wife is driving there to check on lab results in the car. And if I want to call somebody I can make the call."

Office staff reported that processes were streamlined with less paperwork. "The big pains are gone," one physician observed, referring to pulling charts and filing. "The system does all the minutia…and there's less time wasted looking through the chart." Physicians frequently remarked on the clarity of referral reports, the improved communication with colleagues, and accuracy of medication information.

Some doctor-staff relationships were stressed by the change; for others it provided an opportunity to learn to work together in new and usually more efficient ways. Implementation was sufficiently disruptive that the strengths or weaknesses in a practice's organization and operation tended to be revealed by the process. One of the larger practices hired an outside consultant to coordinate the implementation, staff training, and help redesign office policies to accommodate the new systems.

Overall, it raised the need in several practices to designate, or eventually hire, an office manager, as physicians realized they could no longer serve the dual role of practitioner and office manager. Several came to understand that a capable office manager could have reduced difficulty and internal dysfunction during the transition. Some planned to convert their next vacancy to an office manager position responsible for tracking productivity and income, managing staff, and instigating improvements in workflows and quality.

How effective was the intermediary in supporting small practices in making change?

Local, trusted support was absolutely essential to success for the SPeD pilot practices. Many physicians remarked that this support was dramatically different from what is typically offered by hardware and software vendors. One physician marveled about the near limitless responsiveness of the local support team to get them through the rough spots: "They've been here a lot, even on weekends. Once when [a support team member was vacationing] I was able to call him and he gave me an hour of support over the phone."

Not all of the SPeD participants had prior EHR experience, but those who had a basis for comparison expressed a strong preference for a trusted, local, knowledgeable support person.

Important factors for the success of the local team included:

- The skill or personality of the individuals involved;

- Their geographic proximity;

- The prior familiarity and trust that existed because of the relationship of the intermediary to the local physician organization;

- The ability of the local support team to help with problems anywhere in the system (hardware, software, connectivity, interface with labs, pharmacies, and hospitals, and practice issues that arose during the IT implementation); and

- The ability of the intermediary to advocate collectively for practices with vendors regarding hardware/software issues and with local hospitals regarding interface issues.

Subsequent Successes in Tulare

After the initial seven practices implemented the technology, another eight practices were launched and have been successful. TKFMC is currently supporting 20 practices (62 providers) in their eCW implementations (athena was not implemented after the initial 14 practices).

To provide practices with more timely access to data (and more effectively use the EHR), the project standardized the electronic exchange of lab results from a variety of hospital and commercial laboratories using the ELINCS specification (www.elincs.org) and reduced the amount of time and effort typically required to implement a lab results interface. At the time of the initial pilot, two interfaces with local hospital labs were in place; two additional were implemented within the following six months, and two more are getting underway. In addition, one hospital radiology interface is in place and two more are being implemented. Other developments include:

- Local learning communities continue to meet under the auspices of TKFMC as a result of continued interest among practices in sharing best practices and lessons learned.

- Discussions in the community are underway for further technology adoption and the development of health information exchange capabilities in support of clinical care.

- TKFMC is working with the California HITECH regional extension center supporting EHR throughout the state.

Implications for Supporting EHR Adoption in Small Practices

- **Local, trusted support is essential.** Physician participants valued the proximity, timeliness, familiarity with local practices, and trust working with the local medical foundation. Vendor support, in contrast, was noted to be distant, less accessible, and less timely. The vendors, for their part, appreciated the central point-of-contact provided by the aggregator, rather than having to deal individually with practices. This centralized support further facilitated system approaches to enhancing clinical care.

- **Lowering the "practice activation energy" required to adopt EHRs is helpful.** Small low-interest loans, pre-negotiated standardized vendor agreements, and clear connectivity and hardware package options made it easier for physicians to jump in. At the same time, they knew others in the community were making the plunge. Loan forgiveness was provided as an incentive for EHR adoption, but appeared to have little influence on the practices.

- **Creating a "community" for small practices is important.** Physicians voiced a preference for greater interaction among their peers to learn local solutions to implementation issues, and in several cases physicians visited their more successful colleagues to observe them in action. A sense of community was further enhanced by the use of a single vendor/product, enabling physicians to extend support to each other and enjoy cross-coverage from among their similarly trained staffs.

- **Customized support is needed.** Individual physicians had different needs/aptitudes, and they solved problems differently; the training and support team had to be responsive to this uniqueness. Practice workflows and organization were in some ways more flexible with fewer people involved, but were highly dependent on the physicians—who generally were

less skilled in management and team approaches to care. Case studies describe in detail the unique experiences of the first group of practices in the pilot initiative (www.chcf.org).

- **Data exchange limitations continue.** While the practices were able to electronically send/receive prescriptions and lab results successfully, the pilot highlighted ongoing technical and regulatory challenges that have continued to hinder widespread exchange of patient health information.

- **Attention to revenue management is important.** While the pilot did not demonstrate significant enhancement to overall practice revenue, the initial improvement in cash flow using an automated revenue management system was demonstrated. This seemed to prevent significant revenue "hits" to the practice in spite of the productivity slow-down during EHR implementation. This first step also forced practices to look at operational issues and learn how to make changes in how they work—directly impacting their bottom line.

- **It takes time to get to clinical improvement.** Once EHR implementation had been completed, some practices were able to take on clinical improvement projects, while a few had lost momentum. Because of this, the learning community remained largely focused on technology adoption as opposed to clinical workflow enhancements such as advanced access scheduling, more active patient engagement, and outreach/population management. As comfort grows with the use of the EHR, however, more practices are interested in and willing to take on practice and clinical improvement projects.

- **Ongoing local support will be essential in the movement toward "meaningful use" of IT to improve care.** With expectations for continual improvement in clinical primary care practice, some type of organized support/infrastructure will be needed to provide feedback to practices, coach them in making change, and support a community of providers. The initial adoption process was quite resource intensive, but the development of local expertise has helped speed and streamline the process for new practices adopting IT. Nonetheless, IT adoption is only the first step. These local (and even potentially virtual) support systems will need to be developed and maintained if we aim for better health care outcomes in our communities.