

A Health Center Controlled Network's Experience in Ambulatory Care EHR Implementation

Lessons Learned From Four Community Health Centers.

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ABSTRACT

Implementing a full-featured EHR at a community health center is a daunting undertaking. Stakeholder buy-in, contract negotiation, workflow redesign, equipment purchases, preloading charts and trainings are just some of the necessary tasks in managing an implementation. METCHIT, a health center controlled network, used a collaborative approach to implement electronic medical records. This article will cover the experience, benefits and lessons learned by a group of four FQHCs that took a cooperative, mentorship approach to implementation. Since 2005, the four community health centers, Charles B. Wang Community Health Center, Morris Heights Health Center, Settlement Health, and Comprehensive Community Development Corporation, have implemented EHRs at four organizations with multiple sites in diverse neighborhoods in New York City. The collaboration began and grew during this period, aided by a technology grant from HRSA.

With the long-term outcome of national health reform still uncertain, one thing is clear—medical providers who have yet to implement an electronic health record are feeling pressure. Since February 2009, the time ARRA was passed, the inboxes of those in ambulatory care settings have been inundated with e-mail with such key words as health information technology, EHR implementation, meaningful use, financial incentive and, ultimately, implied financial penalty for failing to adopt.

In response to the pressure to implement, organizations have taken their first steps only to become overwhelmed by the complex reality of contract negotiations and equipment purchases coupled with technologically challenged providers and resistance to change are enormous barriers to overcome.

Implementing a full-featured EHR at a community health center is a daunting task for a single organization. In this article, the four community health centers of METCHIT share the most significant lessons learned from their EHR implementation journey: clinical leadership and organizational collaboration open up the possibility of a successful implementation. By addressing these core priorities and leveraging the knowledge that exists within the network, organizations can overcome the challenges

and achieve an operational electronic health record that serves patients and providers.

In the pages that follow we are going to cover: Who are these organizations? What is the history of the collaboration? What lessons can be drawn?

METCHIT—AN OVERVIEW

The Metropolitan Collaborative of Health Information Technology (METCHIT) is a technology focused health center controlled network (HCCN) in the greater New York metropolitan area. METCHIT currently includes four member organizations: Charles B. Wang Community Health Center (CBWCHC), Comprehensive Community Development Corporation (CCDC), Morris Heights Health Center (MHHC), and Settlement Health and Medical Services (Settlement). The network delivers primary care in medically underserved neighborhoods that are predominantly Hispanic, African-American and Asian-American. These centers, with service sites in Manhattan, the Bronx and Queens, served over 100,000 patients and delivered more than 600,000 encounters in 2008. METCHIT's goal is to achieve improved health outcomes in the populations served by the member organizations. The HCCN is utilizing shared resources and a common platform to speed implementation, improve the quality of care, and replicate HRSA's Chronic Care Model. METCHIT is governed by a Steering Committee and Clinical Leadership Committee, which convene regularly.

HISTORY

In 2003 one of the future METCHIT Members, the Charles B. Wang Community Health Center, began searching for an Electronic Health Record. By the fall of 2006, CBWCHC had GE's Centricity EHR operating in all of its existing sites. In early 2007, CBWCHC's long-term collaboration with three other health centers in NYC began to focus on EHRs. Each of the other centers was early on in its implementation process. The four organizations founded METCHIT. In September 2007, the network was awarded an EHR Implementation grant by the Health Resources and Services Administration's Office of Health Information Technology. METCHIT received \$1.4 million to implement the EHR at 18 sites in the greater New York metropolitan area. By Aug. 31, 2009, METCHIT implemented the EHR.

LESSONS LEARNED

The implementation of an EHR requires active participation of members at all levels of an organization, but a system successfully installed is useless unless it is accepted by the end-users. During the network's implementation process, it was the end-users, the clinicians, who selected the EHR vendor. They brought the issues of their organizations to the network Steering Committee table and initiated conversation with outside entities collaboratively, to voice their perspective to EHR and lab vendors, NYC DOHMH, and peer networks. Not to discount the contributions of other staff, but having clinical leaders be the trailblazers down the path towards electronic health records proved successful in our network. The success did not stem solely from commitment to their individual organizations, but from their commitment to the network—to be open, to share a vision and to collaborate.

METCHIT CLINICAL LEADERSHIP

At the HCCN level, clinical leadership played a key role. From the first METCHIT Steering Committee meeting, medical directors and physician champions from each organization were present and actively seeking out and offering advice. In addition to continued participation in the Steering Committee meetings, the METCHIT clinical leadership met separately, convening regular METCHIT Clinical Leadership meetings for more in-depth conversations on the pressing issues. Members at different stages of implementation shared their experiences, difficulties, questions and advice. The face-to-face meetings and commitment to support each other through implementation built a rapport among the clinicians and confidence to push ahead in their endeavors.

The clinical leaders involved in these meetings were key leaders in their own organizations. Medical directors and chief medical officers—in other words, the clinical decision makers -- were the regular attendees and contributors to the network and at the forefront of the implementation process at their respective organizations.

MENTORSHIP

During the course of EHR implementation, METCHIT employed a mentorship strategy. The benefit of mentorship is that the mentor has an inherent understanding of the context of the questions. Therefore, the solutions are often more appropriate. Organizations in later phases of implementation mentored those in earlier phases. As the first organization to implement, CBWCHC mentored Settlement, who mentored CCDC and MHHC. This section highlights and provides examples of some areas of mentorship: recommendations for consultants, preparation strategies, technological advice, and an open door for site visits, shadowing and trainings.

Recommendations. Mentees regarded contract negotiations and organizational preparedness as two of the first issues related to implementation. The EHR vendor was a worldwide company which had enormous legal and financial resources, and offered standard contracts that had been carefully vetted by their staff. Community Health Centers, on the other hand, were often facing for the first time complex issues of support levels, performance guarantees, and pricing models. The cost in time and money for a community health center to negotiate a contract could be overwhelming. Thus, CBWCHC shared its experience negotiating with the vendor, the pricing model it chose and key points that should be included in the contract. Moreover, it recommended its lawyer, one who was experienced with this type of negotiation -- for an EHR system -- and for this type of customer -- a community health center. The goal of this suggestion was to shorten the negotiation process for its peers. This saved time and money because the lawyer was familiar with both the vendor's boiler plate contract as well as specific concerns of CHCs.

The EHR vendor assigns its own clinical consultant to lead the EHR implementation. CBWCHC recommended utilizing the same clinical consultant. By insisting on an individual who had specific community health center as well as New York experience much time was saved. With each successive implementation the consultant learned more about the specifics of community health centers and the regulatory and reimbursement environment in New York. Much hard-won knowledge passed from implementation to

implementation. In the later implementations, MHHC and CCDC collaborated so that they could both synchronize her services. The consultant, who lived outside the New York region, visited both sites in the same trips, and concurrently implemented both organizations. This lowered the travel costs that are the responsibility of each health center. Being familiar with the type of organization, the consultant could advise on the appropriate trainings for the staff and adjustments to workflow. A few weeks into Settlement's implementation, for instance, providers were well-adjusted to the EHR from their trainings.

Preparation Strategies. CBWCHC adopted the successful processes of its New York peers, who had previously implemented the EHR. The organizations it chose to visit were ones with similar structures. Its implementation timeline was modified from what it saw to fit its organization, rather than being reinvented from scratch. CBWCHC shared the successful tips of its implementation with its METCHIT peers, again avoiding reinvention and saving time and money for all.

Once a system is purchased, organizations must develop a well-thought strategy to convert their patient records from paper to electronic. The organization's roll-out strategy determines the order the departments implement, which affects the order paper charts are uploaded into the system. CBWCHC's roll-out strategy was to implement the EHR by specialty. Noting the success of their roll-out strategy, Settlement Health also had a rolling implementation of its main site. It started with Pediatrics, followed by other specialties in subsequent months. MHHC and CCDC had satellite sites, which were not a factor in CBWCHC or Settlement's strategy, but adapted by rolling out satellite sites first and then by specialty in their main sites.

Before go-live, patient information must be uploaded in to the EHR. This pre-load process can consume precious time and resources, especially if providers feel it is necessary to transfer all documents from each patient's paper chart to the EHR. A more effective strategy is for the clinical leader, with the input of their specialty providers, to select documents to be preloaded. CBWCHC mentored its network peers in this process, sharing which documents it selected to preload before go-live of each specialty and how the initial visits were conducted based on the new, limited electronic information. CBWCHC also noted that a very important part of pre-loading was to have the providers do it. It is the only way they can get training prior to go-live. They will understand how the system flows by inputting charts. The pre-load strategy became more sophisticated as it evolved through the METCHIT network.

Template Customization. Though template packages sometimes come bundled with the EHR system, modifications are necessary, especially for those in community health center settings who have mandatory and diverse reporting requirements. Modifying templates requires attention to the design of the template, to where the data will be inputted and stored, and lastly, to how it will eventually be reported. It is best for these templates to be ready on the date of go-live so that data can be captured appropriately from the first patient visit. If modifications to templates occur after implementation, providers will have to be retrained on

the new templates, a tedious and time-consuming process considering the substantiality of adjusting to the EHR in the first place. One goal during this process should be to gain as much provider acceptance of the technology as possible, and this area is one where potential protest could be avoided. During implementation, network members shared modified templates, sparing precious resources, money and time. These modifications allowed for population and disease specificity, providing the necessary data for FQHC required reporting.

Which templates were modified? Clinical leaders chose to modify templates only when there was need. Some needs that were addressed by modified templates were applicable to other health centers, so it was only appropriate to share. This avoided

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reinventing the wheel among four collaborators. For instance, the current EHR system does not collect race and ethnicity in a manner sufficient for reports required by CHCs or for actual clinical uses. CBWCHC had to make its own forms and observation terms, which was readily shared with other METCHIT members, who had similar reporting needs. OB-GYN templates were designed so that CHCs could send reports from the EHR to hospitals that were performing their patients' deliveries. As it was, the EHR did not collect the proper information or print it out in a format acceptable to the hospitals. Settlement spearheaded the collaborative initiative to create templates that would collect and report the necessary data, again, to avoid repetitive work among the centers.

Lab Interfaces. In addition to sharing a common EHR system, three of the METCHIT members also share the same primary laboratory vendor. As the final implementer CCDC was the beneficiary of many of the efforts of CBWCHC and MHHC. Many of the common laboratory tests were consistent throughout the members of METCHIT, therefore many of the preparatory tables needed to build the interface were also very similar.

Technological Support: Implementing the EHR requires immense technological support, an area also willingly provided by METCHIT. Advice on equipment decisions, for instance, prevented unnecessary purchases and processes. During their early search for an EHR, Settlement Health Center did not know whether it was necessary to upgrade their practice management system along with the implementation of their EHR. Settlement assumed it would be necessary to purchase a practice management system from the same EHR vendor to ensure compatibility. However, the organization was content with its current practice management system and preferred to keep it. By presenting this issue to its mentor, CBWCHC, Settlement discovered that CBWCHC had the same practice management system and had been able to interface it with the new EHR. This discovery spared Settlement the chal-

allenges of practice management implementation. It allowed them to keep a practice management system they liked and focus their efforts on EHR implementation, which was their original goal.

In another instance, a mentee benefits from a mentor who undertook the implementation of a practice management system. MHHC did implement the practice management portion of the EHR prior to implementing the medical record, which CCDC also plans to implement. The organizations have already begun discussions for site visits of key staff members as an early step in this implementation process.

Technological support was also exemplified through site visits of IT staff. A shared METCHIT IT consultant and CBWCHC's IT Manager, two people who were involved in CBWCHC's implementation, visited members preparing their implementations to review their equipment specifications. In addition, they provided opportunities to share a common equipment and technological lessons learned from previous experiences.

Inter-Organizational Expertise. As sites began to implement, organizations began to develop internal staff to focus on the new reporting and data collection needs that accompany an EHR. METCHIT members shared job descriptions, table of organizations and other ideas to facilitate recruitment of staff. CBWCHC, having developed its own Clinical Informatics (CI) department, arranged to train one of the CI staff at Settlement. Over a period of several weeks, she came one day a week to receive practical, on-the-job training on the system she will eventually be using. The network believes cross training is a method to recruit and retain staff.

Open Doors and Open Phone Lines. Along with opening doors to other organizations visiting their sites, mentors also kept open phone lines, delivering on-the-spot solutions generated from their experiences for mentees in crisis. New York State has a very specific prescription protocol and on the "go-live" day at its first implementation site CCDC encountered a problem with printing prescriptions from the EHR. CCDC was able to immediately call its partners at MHHC whose "go-live" day was one week prior. The problem was resolved within minutes and did not cause any significant issues.

The mentorship model provided structure to the HCCN's goal of implementing the EHR at four different organizations. It allowed members the opportunity to avoid mistakes and prevented reinventing the wheel. Members achieved confidence at each step of implementation from their enhanced knowledge.

Despite common issues, implementation is hardly a cookie cutter process. It is unique to each organization, which has its own different culture, technological starting point and individual goals. For this reason, later implementers were facing issues that the more experienced implementers had not encountered. In the end, all organizations, no matter their order in the implementation sequence, were constantly learning from each other.

Lab interfaces, for instance, was an area of importance for the network but still a new area during the implementation process. In spring 2009, Settlement received notice that its primary lab provider, which was interfacing with the EHR, was being eliminated from the preferred labs list of one of its insurance companies. It discovered that installing and maintaining a second lab interface would require more information technology and

back office support than the organization could maintain. This issue was shared at the METCHIT clinical meeting. Other members were never presented with the same situation and were not aware of the difficulties of supporting two functioning lab interfaces with the EHR. As a result of the shared knowledge, Settlement informed both its more experienced and less-experienced EHR peers of a potential occurrence that could have affected any of the network members.

Some of the greatest challenges associated with later implementations were in areas in which there were no prior knowledge to share. For example, CBWCHC could only offer advice on its version of the EHR, which was compatible with its current practice management system. When Settlement tried to implement a newer version of the EHR system, it could only trust the vendor, who assumed that the newer version would also be compatible with its practice management system. A few weeks before installation, the EHR vendor discovered the newer version was not interfaceable with other practice management systems. Settlement's implementation date was delayed, and in the end, they implemented the same version as CBWCHC. The implementation of this version was successful, since much of groundwork for interfacing with the practice management system was already completed.

The success of Settlement's implementation with the same EHR version as CBWCHC compared to the difficulty of attempting to implement a new version highlights not only the value of mentorship, but also the fact that some areas were new for all members. In the end, mentors were able to offer recommendations, advice and solutions for some issues, but for other issues, collaborative brainstorming sessions were more helpful. At times, the better solution was produced from pooling all individual experiences together, and at others, the collaboration was walking through a new issue together. This accents the significance of network level collaboration, elaborated further in the next section.

NETWORK LEVEL COLLABORATION

Problem Solving and Emotional Support. At METCHIT meetings, members would not only update on their project status, but present their current challenge or questions. Almost immediately, there would be an enthusiastic response from others, offering their experiences and advice. The dynamism was invigorating. The knowledge pooled together at these meetings informed the process, often providing a multitude of options. Moreover, along with active contributions came emotional support. New implementers would go back to their respective organizations with confidence, not because they had all the answers, but because they knew if they didn't, they could call on their support network.

One of the factors in the successful operation of these meetings and support provided was METCHIT's underlying structure. One person was designated to be the first point of contact for health centers related to administrative matters. If she could not answer their questions, she would direct them to others in the network who could. She was aware of all METCHIT activities, and all information sent out to the network was funneled through her. Reporting to the government and initiating conversations with other outside entities would be organized and facilitated by this same person, who involved parties as necessary. Having

a designated METCHIT facilitator and liaison ensured follow up and that the priorities of each meeting stemmed from combined knowledge of the needs of each participant.

The Project Manager was designated to be the point of contact related to technological and financial matters. He was familiar with the unique culture and history of each of the organizations, and was a key role in the technological needs as they implemented. Also, with his individual relationships with the health centers, he had an overarching view of the network's progress as a whole. The Project Manager and METCHIT liaison worked closely together to make sure METCHIT members felt the support of their network.

BRAINSTORMING AND STRATEGY

It's a common saying that two heads are better than one. Similarly, four heads, or organizations, are even better. There were situations where all organizations were at the same level in knowledge and experience, and network meetings became brainstorming sessions for collaborative solutions. Each organization brought a list of priorities it wanted to address, and together, METCHIT agreed upon a joint list of technological priorities. Discussions focused around these priorities, resulting in solutions and plans of actions. One priority was being able to manage relationships with vendors. Others were quality reporting and using the EHR for the HRSA Chronic Care Model. METCHIT came up with two collaborative solutions: first, to leverage its strength in numbers with vendors and second, to host a joint technical assistance visit of a more experienced network to gain knowledge in its other priority areas.

Common Front with Vendors. Although implemented for several years, the network did not feel that the EHR vendor had modified its system to best suit the needs of the CHC customer. Certain programmed buttons did not perform expected functions, and the organization desired for training on how providers could better navigate the system. In addition, as the network implemented more sites, it began discussing other technological goals, such as installing bi-directional lab interfaces. Only one member was in discussion with a lab for an interface, but the process was fairly early, and the network members knew collaborating on this effort may prove as successful as collaborating on EHR implementation. This prompted the network to use its strength in numbers to attract the attention of the lab and EHR vendors.

The unified voice was strong. Upper level executives of the EHR and lab vendors were motivated to travel to the network's table and hear METCHIT's opinions and provide their best consultants for demonstrations. While change has been a process, the initial meetings opened a door for conversation between the HCCN and the vendors. It also made vendors more sensitive to the needs of its CHC customers.

Joint TA. At a conference of the Healthcare Information and Management Systems Society, one of the METCHIT members got acquainted with another network. This second network, longer established and more practiced in EHR implementation, was a deep source of information. Moreover, this second network

shared the same values regarding collaboration and was open to visiting to bestow its experience and advice.

Since all members were facing similar organizational priorities, METCHIT decided to host the network jointly. With the aid of HRSA funding, the Alliance of Chicago Community Health Services, Inc. staff traveled from Chicago to New York and conducted a two-day formal technical assistance visit. The first day began with introductions, where each network articulated its story from inception to their current model for collaboration. Hearing the Alliance's experience, accomplishments and challenges in collaboration provided a model for comparison for METCHIT, especially as it looked to develop its structure further. The core of the visit consisted of sessions on relevant EHR topics, including: lab-interfaces, reporting, using the EHR for chronic disease

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management and quality assurance. In each area, participants shared their experiences and progress. The two networks discussed their experience with a particular lab vendor and progress in developing a bi-directional lab interface with the EHR. It was evident those similar issues were priorities for both networks, and that the individual conversations of each network with the lab provider were parallel. It suggested avenues for collaboration on bi-directional lab interfaces, and provided both organizations insight and help in dealing with EHR and third-party vendors.

The event exceeded expectations. It fully explored how an HCCN can use EHRs to promote the care model, and helped METCHIT see the next steps in implementing chronic care collaboratives. Also, not only did it introduce and reacquaint members of the organizations, it laid the basis for an active, on-going collaboration.

Having a joint technical assistance visit from another network stemmed from each network member's acknowledgement that common issues should be addressed together. Guidance and solutions were gained in specific areas, but one of greater achievements of the visit was to make clear that there is a fruitful path to long-term collaboration among HCCNs.

NEXT STEPS

In hindsight, METCHIT members would agree it is better to be part of a health center controlled network than a single entity. Outside the scope of implementation, working together has allowed for more efficient sharing of resources. For example, evaluating new technologies, new versions of software, scanning and indexing, even evaluating new grant opportunities were divided amongst health centers instead of all investing time and effort into the same evaluation. Individual members also represented the network in national meetings or in building relationships with city, state, and governments. As METCHIT continues, it looks towards its next steps and is currently prioritizing goals

for the future, such as: common template designs, common data and reporting platforms, and sharing staff resources. It also looks to pool network data for research and collaborate with other networks. All these future activities stemmed from the positive experience of collaborating on EHR implementation.

CONCLUSION

Collaboration is a key factor for efficient and successful implementation of an EHR. The value is in replicating rather than reinventing, and choosing to replicate with organizations who share similar struggles and need. Through mentorship and regular meetings of the network's clinical leadership, each organization had a less steep learning curve than those in previous phases and avoided repeating mistakes of its peers. Clinical meetings provided a collegial environment where members could share their experiences, questions and advice. Moreover, the positive rapport formed among the clinicians through implementation prompted further collaboration on subsequent health information technology endeavors, such as: bi-directional interfaces, relationships with vendors and other outside parties, reporting and template design, and policy. All in all, collaboration through a network can greatly increase an individual health center's wealth of knowledge and voice (in numbers), while reducing time, stress and finances. **JHIM**

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