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TRENDS IN HEALTH INFORMATICS

# Health Information Exchange: The Role of Safety-Net Providers

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*In recent years, the federal government and private-sector leaders have accelerated efforts to promote adoption of health information technology, or health IT. Initiatives include development of local efforts to exchange health-related information among providers—called "health information exchange" (HIE). To date, most health IT efforts aimed at the safety net have supported adoption of electronic health records in community health centers (CHCs), but little attention has been directed toward preparing safety-net providers to keep pace with other providers in exchanging information across organizations. Yet integrating HIE across providers could improve the quality and efficiency of care provided to the nation's most vulnerable populations. The American Recovery and Reinvestment Act (ARRA) provides an opportunity to help safety-net providers implement HIE. With this opportunity in mind, this brief reviews safety-net providers' viewpoints on barriers to and catalysts for adopting HIE.*

## What Is HIE?

Health information exchange is the sharing of health information electronically, with strong privacy, confidentiality, and security protections, among organizations within a region or community. HIE can occur with a negotiated arrangement across two or more organizations, such as a hospital and clinic or a group of clinics. Alternatively, HIE can be an organized communitywide effort, sometimes known as a Regional Health Information Organization (RHIO). As HIE grows, additional models may emerge in the future.

ABOUT THE PANEL

In October 2007, Mathematica convened a 13-member panel that included representatives of safety-net providers participating in HIE efforts, leaders of broader health information exchange efforts that included safety-net providers, and a consultant who had assisted safety-net providers in participating in health information exchange. Participants described the challenges and issues they faced as they worked to implement HIE. They also suggested ways the federal government or others could support safety-net providers in participating in HIE as it spreads nationally. The panel was part of a project funded by the Agency for Healthcare Research and Quality (AHRQ).

## What Could Be Gained?

HIE has the potential to improve care and reduce inefficiencies where the need is greatest. Safety-net providers serve low-income, uninsured populations, who are more likely than others to have complex health needs. In addition, national studies have found that uninsured patients are less likely than patients with health coverage to have a usual source of care. It is important to engage safety-net providers to participate in HIE, and to consider their special circumstances and needs, so existing disparities do not grow.

HIE may help improve emergency as well as routine care. For example, HIE could help an emergency room physician treating an unconscious patient access key information about the patient's medications and diagnosed health conditions.

HIE also has the potential to reduce inefficiencies associated with the fragmentation of health care delivery. For instance, HIE could mitigate duplicate testing as patients move from one provider to another.

## Viewpoints of Panel Members

Mathematica researchers convened a panel to learn about perspectives on HIE. The providers on our panel came to participate in HIE in various ways. Some were involved in the creation of local or regional HIE efforts focused on safety-net providers and their uninsured or underinsured patients. Others were active in the development of large RHIOs that included a range of health care entities looking to exchange information for all patients. Some were approached by large hospital systems that offered to fund or help negotiate discounted information technology to facilitate data exchange.

Political pressure also came into play. In one area, the local public health department led the effort, talking publicly about the poor state of emergency care and articulating how data sharing could improve health care services. In another instance, the state reminded a large safety-net hospital about the substantial funding it received because of its safety-net status, arguing that this status carried an obligation to work with primary care safety-net providers as well.

## Obstacles Along the Way

*"Until CHCs have enough wealth, time, and expertise to think about more than just staying open, they won't be engaged in data sharing."* –AHRQ panel member

The main challenges for safety-net providers to participate in and accomplish health information exchange are threefold: lack of money, lack of expertise and infrastructure, and need to focus on survival. HIE efforts at the community level involve considerable additional obstacles (regardless of safety-net provider participation). These include defining the effort, building trust among participants, and addressing technical issues.

## Safety-Net Provider Challenges

**Funding as a prerequisite to participation.** Safety-net providers that do not have funding to make health IT changes are unlikely to participate even at a listening/talking level with any community initiatives. Reluctance to participate may stem from a priority on year-to-year survival. These providers may also not be invited to the table because the initiators of health IT efforts know they are probably unable to support and implement an initiative.

**Availability of expertise.** Lack of expertise is a substantial barrier for many primary care safety-net providers. Even if they have the funds to support implementation, they often lack staff with the ability to carry out such an effort.

Safety-net providers may be unable to afford industry-standard knowledge resources, which may also not be geared to their needs. For example, many reported that programs sponsored by the Health Information Management Systems Society—a professional association for health information technology—were too costly. Furthermore, a rural provider commented that the programs "may not map to the rural experience."

**Sustaining the effort.** Primary care safety-net providers that manage to overcome these barriers and participate in a local HIE effort may have difficulty sustaining their effort. Said an executive of one such health center, "Other players in the community have the math figured out as to how HIE can be sustained, but the formula is different for CHCs, and others don't necessarily look at how CHCs will be able to sustain this."

## Community-Level Challenges

**Building trust.** Implementing HIE at the community level involves trust and local politics. One organization has been supporting clinical data exchange in a network of rural hospitals and a community health center for many years, but only recently signed a data use agreement with the local public health department. Building trust is a lengthy process "because people are very nervous about how the data will be used." Satisfying data security and confidentiality concerns is clearly a prerequisite to any HIE, within or outside the safety net.

Another trust issue is that primary care safety-net providers do not want to feel bullied by larger health care organizations. A representative from one initiative commented that making the HIE entity a separate organization was a good way to show that it represented a true collaboration. Another reported developing sufficient trust among the remote rural communities served by one initiative took 10 years, but they are now able to share information in a single database. Another community's HIE effort progressed to the operational stage precisely because it was focused on safety-net providers, and a data repository for the low-income population was easier to build politically.

*"Everyone agreed to do HIE, but then it was difficult figuring out what to do."* –AHRQ panel member

**Defining the initiative.** A second challenge with community-level HIE is designing it in a way that meets common interests of providers that must implement it. Often, providers come to the table with

different agendas. In the end, not all participating organizations end up equally well-served. Contributing expertise and ideas is important at this stage; said one panel member, "It eventually came down to what the hospitals wanted, because the hospital physicians were the ones at the table." Currently, safety-net providers are less likely to have staff who can effectively identify and represent their interests.

**Technical issues.** Electronic health records (EHRs) are the building block for most HIE, although other technologies such as clinical messaging are also in use. Deciding how clinicians will be connected in HIE may be complicated by different capabilities of EHR systems already in place within organizations working to share information. Recently, RHIOs in Colorado and western New York, among others, have used products that facilitate data exchange among providers with different EHR systems. These types of technical solutions can help support the spread of HIE.

## Panel Followup

The box on this page reports the results of follow-up interviews with several panel participants to see how HIE activities, and intentions for the future, had changed after our initial meeting in 2007. The initiatives continued to operate as they had in 2007, and one had plans for enhancement if grant funds became available. While both efforts report benefits, they have much room to expand clinical information sharing to achieve additional gains. Both efforts focus on providers within a concentrated city safety net in which a relatively small number of providers deliver most health care for the poor and underserved.

Not all areas have concentrated safety nets that could implement HIE effectively just among safety-net providers. Two participants in our panel represented communitywide efforts involving development of a RHIO. They had not met expectations for becoming operational, though the efforts were still under way. This result is consistent with struggles of communitywide RHIOs reported elsewhere in the literature. The safety-net providers we spoke with remained involved in the RHIO effort, still believed in its potential for the future, and in one case, had designed and begun implementing a patient consent process to be ready to participate as soon as possible.

### USE OF HIE BY SAFETY-NET PROVIDERS IN CONCENTRATED SAFETY NETS

**Integrated Care Collaboration, Austin, TX**

–Formed in 1997 as a three-county regional alliance of health care safety-net providers to leverage resources through information sharing. Funded through membership fees, it is self-sustaining.

–Created the ICare searchable database. As of 2008, the database includes 700,000 uninsured and underinsured patients, with 23 organizational members sharing information from more than 70 locations.

–Includes demographic information, treatment location and service type, attending physician or medical practitioner, medications, diagnosis and procedure codes, payer or funding program, admission and discharge dates and times, and types of encounters (hospital, outpatient, emergency department, and clinic visits).

–Reported return on investment of $5.50 for every $1 spent, based on its internal study examining patients pre- and post-enrollment compared to a control group of patients not enrolled. The database was also used to develop the ICC-Asthma Network, which identifies and intervenes with patients who would benefit from asthma education and training. (www.icc-centex.org)

**KC CareLink, Kansas City, MO**

–Formed in 2001 as an information technology collaborative in the Kansas City, Missouri, regional area (which was expanded to Kansas in 2003), to streamline and integrate communication between safety-net providers through HIE. Funded with membership fees; planned enhancements will require grant funding.

–Created a searchable master patient registry, with about 200,000 patients (in 2009).

–Includes demographic and insurance information and a referral history. Members can send electronic referrals to other providers with patient contact, demographic, insurance, and referral information. They can also attach electronic files with medical information.

–Reported 40 percent cost savings from workflow efficiencies, based on a member hospital's internal pre- and post-study.

–The next generation of HIE (which will require grant funding) will expand beyond the safety-net provider community to involve more providers/users, include more patients and medical information, and offer greater functionalities, allowing clinical data to be accessed directly and patients to be followed more effectively. KC CareLink is pursuing collaborations; for example, a nonprofit organization that oversees personal health records for area employers could add 100,000 patients to the database. (www.kccarelink.org)

## Ten Ways to Help

Safety-net leaders who participated in our panel offered suggestions for how federal and state governments, foundations, and other interested organizations, such as the eHealth Initiative and the Health Information and Management Systems Society, could expedite effective implementation of HIE. These technical assistance suggestions complement the planning efforts of the AHRQ National Resource Center for Health IT, as well as the HIT Research Center, a new entity established under ARRA, and the new HIT Regional Extension Centers. These federal entities also need to coordinate their work to avoid creating confusion "on the ground." The panels' suggestions are as follows:

1. Help safety-net providers learn from their high-performing counterparts to shorten development efforts. This may include convening the high performers to produce common lessons learned, developing case studies, supporting connections with peers, and/or providing templates and other resources that can be adapted.
2. Educate primary care associations, among others, about HIE, so that they can better support primary care safety-net providers in related efforts.
3. Create a mobile education team to travel to rural communities to educate staff about implementing health IT that includes health information exchange.
4. Provide free or inexpensive videos of presentations at major HIE-related conferences.
5. Provide basic IT resources for providers who lack IT support.
6. Provide analysts or experts who can help a community prepare to implement HIE in terms of financial analysis, governance, legal issues, sustainability, workflow, and strategic planning.
7. Identify and support local physician champions to increase physician interest both within and outside the safety net. Use specialty associations to conduct outreach and provide education to physicians affiliated with safety-net providers.
8. Communications are key to developing relationships that underlie successful HIE. Help larger organizations understand how to approach smaller organizations to offer assistance, and conversely, help smaller organizations understand what to ask larger organizations when they are approached about participating in HIE. The AHRQ National Resource Center for Health IT, HIT Research Center, and HIT Regional Extension Centers created under the ARRA could play a key role in developing materials to meet this need.
9. The federal government, as a trusted source, should provide clear advice/interpretation on legal issues, such as consolidating patient records. The HIT Standards Committee, charged under ARRA with recommending standards, implementation specifications, and certification criteria for electronic exchange and use of health information to the National Coordinator for Health IT, could play a key role.
10. Articulate the benefits of HIE to physicians, patients, and others. Evidence on the benefits of HIE in different health care markets will take time to develop. This suggestion recognizes that articulating the case for HIE from the perspective of physicians and their patients is important to achieving widespread implementation.

## Future Directions

HIE has wide potential for improving the quality and efficiency of health care services provided in our country, and in particular to our most vulnerable citizens. Yet safety-net providers may lag behind if their needs aren't taken into consideration. ARRA provides a new opportunity to support the health care system in moving forward more swiftly with HIE. Our nation's leaders could play a valuable role in supporting safety-net providers in preparing for and implementing this important endeavor.

For more information on research in this area, contact Sue Felt-Lisk at (202) 484-4519, sfelt-lisk@mathematica-mpr.com. Go to www.mathematica-mpr.com to read more about Mathematica's research on health information technology.