



Local Health Care and Public Health Delivery Systems: Health Information Technology Implementation Challenges and Opportunities¹

Introduction

This brief highlights some of the key issues related to the integration of health information technology (HIT) into local health care and public health delivery systems. Electronic information sharing among all relevant providers has the potential to improve care quality and coordination for individuals, increase patient safety and reduce inefficiencies in care. Also, improving the overall health of the population requires increasing access to health data at all levels of the health care system. Within the range of ongoing initiatives to promote HIT, it is important that local-level care providers are included in planning and implementation efforts concerning electronic health records (EHRs), transfers of health data, as well as other health information technology applications.

Background Information

Efforts to implement a secure and interoperable nationwide electronic health record for all Americans began under the Health Information Technology for Economic and Clinical Health (HITECH) Act, which was part of the American Recovery and Reinvestment Act (ARRA) of 2009. The HITECH Act aims to promote the use of HIT throughout the United States by providing incentives for the adoption of EHRs. Specifically, the HITECH Act provides approximately \$20 billion in Medicaid and Medicare bonus payments for eligible professionals and eligible hospitals that use EHRs, provided they meet the criteria regarding meaningful use². The HITECH Act has the potential to significantly impact the way local health care delivery systems receive, exchange and utilize health data.

Also as part of the HITECH Act, through the Department of Health and Human Services' Office of the National Coordinator for Health IT (ONC), in March 2010 the State Health Information Exchange Cooperative Agreement Program provided states and state designated entities with funding to develop and implement plans for statewide electronic health information exchanges (HIEs). The program aims to expand on current HIE processes at the regional and state level, enhance capacity for exchanging health information both within and across states and promote efforts toward national interoperability. HIE is a key aspect of ensuring the meaningful use of EHRs and other forms of HIT³.

In addition to support of HIT through the HITECH Act, the Patient Protection and Affordable Care Act (PPACA) includes a provision which requires the development of standards and protocols to facilitate the enrollment of individuals in federal and state health and human services programs. The ONC has organized an enrollment workgroup to provide guidance on developing these standards.

¹ A group of organizations representing some local health care providers and other local entities helped contribute to this document.

² Meaningful use is defined broadly as providers using EHRs to significantly improve patient care. The Stage 1 criteria for meaningful use were finalized through regulations issued in July 2010 and include 15 mandatory or core objectives and 10 optional or menu objectives (providers must select five of the menu objectives).

³ For more information, see: <http://healthit.hhs.gov/portal/server.pt?open=512&objID=1488&mode=2>

Furthermore, in 2010 through the Beacon Community Cooperative Agreement Program, seventeen communities across the country have received funding to develop and enhance their HIT capabilities. The \$10-20 million in funding for each community, distributed through the ONC over three years, is also part of the Recovery Act and will help these communities develop HIT infrastructure to improve health care delivery and quality. The Beacon Communities are intended to serve as models to disseminate lessons learned that will be applicable to national HIT implementation efforts.

Regarding the adoption of EHRs and other broader HIT implementation issues, the following points highlight the some of the key issues for local-level health care and public health delivery systems:

- *Strong federal and state government support for the development and comprehensive integration of health information technologies at the local level and target resources effectively:* Efforts to develop a nation-wide system of EHRs require federal and state government recognition of the importance of meaningfully integrating health information technologies into local health care delivery systems. Ensuring that resources are targeted most effectively and offering technical assistance that meets the needs of local providers with differing levels of technical expertise and existing infrastructure will be important for successful implementation of EHRs and other HIT applications at the local level. Additionally, promoting interoperability across federally funded systems has the potential to improve the effectiveness of health information exchange. Furthermore, in addition to EHRs, federal and state government support of the implementation of other health information technology tools at the local level is important as well.
- *Recognition of the important roles of local safety net care providers and the needs of the clients they serve:* Individuals served by local-level safety net health care providers frequently experience problems in accessing health care, are uninsured, and may also have complex health needs. Successful implementation of EHRs offers the potential for providers to offer better treatment and coordinated care for these individuals.
- *Address local-level provider needs in state health information exchange (HIE) plans and consider the complexity of local health care and public health delivery systems:* State HIE plans should take into account the complexity of the local health care delivery system and local public health needs during the design and implementation process of the statewide HIE to ensure interoperability among all systems. Designers of state HIE plans should actively involve local health care providers in the HIE planning process.
- *Encourage Regional Extension Centers (RECs) to connect with local-level providers:* Regional extension centers (RECs) are tasked with supplying technical assistance to providers and entities intending to implement an EHR and help providers electronically exchange information. RECs should proactively approach local health care providers to ensure that they are as engaged as possible in the development and implementation of EHRs and participating in data exchanges.

Overview of Local Health Care Delivery Systems and HIT

There are a range of different types of care providers at the local level, including local health departments, community health centers, and mental health and substance abuse treatment centers. The following outlines some of the primary areas within the local health care delivery system and some general HIT implementation issues.

Local Health Departments

According to findings from the National Association of County and City Health Officials' (NACCHO) 2010 Informatics Needs Assessment⁴, the use of HIT in local health departments (LHDs) varies, with LHDs that serve a large population base being more likely to use electronic health records or other forms of HIT. Of those that provide primary care services, 13 percent use a fully electronic health record and 42 percent use a partial electronic system. However, of the LHDs that use a completely paper-based system, 64 percent plan to implement an EHR in primary care and 46 percent plan to do so for dentistry. As far as HIEs, 25 percent of LHDs plan to work with state health departments, and LHDs that were aware of the development of statewide HIEs anticipate that they will provide better access to current health data.

NACCHO also found through the Informatics Needs Assessment that 37 percent of LHDs did not plan to seek resources from the HITECH Act, and another 46 percent did not know if they would or not. The primary reasons for not seeking resources were a lack of awareness of opportunities and a perception that LHDs did not qualify. Regarding these incentive payments, LHDs that provide direct clinical services to Medicaid or Medicare patients may be eligible for bonus payments if they use an EHR, and those that provide primary care or dentistry services may also be eligible.

Local health departments that provide primary care services often serve those who fall between the cracks and have few other options for health care and preventive services. They also provide community-based individual-level care, such as maternal and child health home visits or high blood pressure screening. These encounters all generate healthcare data that should be readily accessible by the patients' other providers so as to improve the quality, efficacy and safety of care, and the records maintained by these programs may lend themselves to EHR solutions. Local health departments are an important part of the community safety net, and can help to provide a community-wide view of trends in health status, with the help of electronic data from other health care providers.

From 2011 onwards, health care providers will seek to electronically send immunization, syndromic surveillance, and laboratory data to public health agencies. From 2013 onwards, LHDs may be expected to electronically send data and information to health care providers. However, 62 percent of LHDs store some or all of their immunization records on paper and 30 percent do not use an electronic surveillance system. It will be difficult for the benefits of meaningfully using EHRs to be realized unless LHDs are supported to electronically send and receive population health information.

Community Health Centers

Community health centers are another important local health care provider, providing individuals with primary care and other health care services. According to a 2008 survey conducted by the National Association of Community Health Centers, of the 362 health centers that responded, 49 percent indicated that they were using an EHR and were either "all electronic" or were "part paper and part electronic"⁵. (However the survey analysis notes it was likely an over-sample of actual implementers of EHRs and most responding would not meet fully functional EHR criteria.)

⁴ National Association of County and City Health Officials (NACCHO). 2010. "The Status of Local Health Department Informatics." Research Brief. May.

⁵ Lardiere, Michael. 2009. "A National Survey of Health Information Technology Adoption in Federally Qualified Health Centers." National Association of Community Health Centers.

http://www.nachc.org/client/documents/NACHC%202008%20HIT%20Survey%20Analysis_FINAL_6_9_091.pdf

The survey also indicated that just 20 percent of responding health centers reported that they share data with other providers such as labs and hospitals. Among those that do, more than 30 percent share data with a Health Information Exchange (HIE) or Regional Health Information Organization (RHIO).

Community Behavioral Health Care Providers

According to a report from the Substance Abuse and Mental Health Services Administration (SAMHSA)⁶, twenty-one states reported that EHRs are installed (in full or part) in community mental health provider agencies.

Building a system of electronic health records that captures not only patient physical health data but also information about behavioral health is critical to developing a comprehensive HIT system that works well for both patients and providers. Promoting the use of EHRs must include mental health providers so that individuals with behavioral health and substance use issues can potentially receive more coordinated and better quality care.

While county behavioral health care providers are excluded from the HITECH financial incentives, the Health Information Technology Extension for Behavioral Health Services Act of 2010 (H.R. 5040), would extend health information technology assistance eligibility to behavioral health, mental health, and substance abuse professionals and psychiatric hospitals, community mental health centers and other treatment facilities. Similar legislation in the Senate, S. 3709, has also been introduced in 2010. HHS and IOM currently have projects underway to define appropriate incentives for these providers.

Hospitals

According to a recent survey conducted by the American Hospital Association, only 12 percent of hospitals indicated they used EHRs and just 2 percent would have been able to meet the meaningful use requirements and qualify for the incentive payments. Also, electronic records were less likely to be used by small, public and rural hospitals than larger, private, and urban hospitals⁷.

Long-Term Care Facilities and Community Based Services

Long-term care can be provided in either community-based or institutional settings (e.g. nursing homes). Individuals providing long-term care may be informal caregivers, who are typically unpaid family members or staff in care facilities. Given the fact that older individuals typically have multiple chronic conditions and frequently move between different care settings, EHRs have the potential to be helpful to long-term care providers.

According to the Agency for Healthcare Research and Quality, although recent analyses of HIT utilization in nursing homes have shown greater implementation efforts than previous studies, in general adoption of HIT is not prevalent in long-term care settings. One of the primary challenges for HIT adoption in long-term care is a lack

⁶ Substance Abuse and Mental Health Services Administration (SAMHSA). 2008. Characteristics of State Mental Health Agency Data Systems. http://download.ncadi.samhsa.gov/ken/pdf/URS_Data07/CMHS_State_MH_DataSystems.pdf

⁷ Jha, Ashish, et al. 2010. "A Progress Report on Electronic Health Records in U.S. Hospitals." *Health Affairs*. August 26.

of information sharing standards among providers⁸. Additional challenges lie in sharing data between medical and non-medical providers who are not used to working together but who are both responsible for an older individual's care. These providers may include a range of medical and human service providers, from clinicians at hospitals and other acute care facilities to social workers and case management professionals and service providers in the Aging Network that develop care plans for individuals transitioning from a medical-setting back to their own home. In addition to care transition efforts, EHRs offer great potential to assist medical and human service providers to work together to offer targeted health promotion and disease prevention efforts and chronic care management programs.

Jail Inmate Health Care

Often overlooked but important local-level providers of health care are jails, which are required by law to provide health care services to inmates. Jail inmates often have complex health needs, such as acute and chronic medical problems that may never have been treated or only addressed sporadically. Additionally, many have behavioral health issues—according to 2006 estimates from the Bureau of Justice Statistics, 64 percent of jail inmates have a mental health problem.

Information technology and EHRs offer jails the potential to provide better care by reducing medical errors and increasing communication with care providers. For example, a community-based approach to providing care, where inmates are connected with care providers in the community, can help provide more coordinated care which can continue after an inmate leaves jail. Providing this type of care requires building connections between community health providers and jails, which can be better facilitated through HIT. As noted by the Robert Wood Johnson Foundation, jails often provide care to individuals who have also been treated at community health centers, and therefore sharing information between providers is important for continuity of care.⁹

While a small number of jails have implemented EHRs or telemedicine services, most jails do not have integrated information technology systems that can help facilitate community-based care. Federal and state officials should recognize that including jail inmate health care in HIT planning is important to develop truly comprehensive efforts to implement HIT.

Health Information Sharing with Human Services Agencies

Sharing EHRs and conducting HIE with local human services agencies has the potential to benefit both health care providers and social service providers as well as the individuals they serve. Local human services agencies very often provide services to many of the same individuals that are cared for by local health care safety net providers.

While exchanging EHRs with human services agencies is not currently occurring on an extensive basis, there are some local efforts to exchange medical information about clients with human services agency staff. For example, for behavioral health services management, Wake County, NC Human Services uses software for client

⁸ Agency for Healthcare Research and Quality. 2009. "Implementation of Health Information Technology in Long-Term Care Settings: Findings from the AHRQ Health IT Portfolio."

⁹ Robert Wood Johnson Foundation. 2009. "Linking Health Care in Jails and Communities Through Information Technology." Issue Brief, January.

scheduling, billing, and clinical and EHR tracking. In King County, WA all case management clients served by the Area Agency on Aging (AAA) have electronic records in which medical and functional/mental health assessment information is tracked, and shared with the state social and health services agency. The AAA also has a chronic care management project that utilizes electronic records and shares data with the area's public health hospital center. Also, in Los Angeles, to improve coordination of care and treatment for homeless individuals the local health and social services agencies developed an electronic database for sharing information among providers to ensure clients are receiving the appropriate level of care and services are not duplicated.

There are also some local efforts around integrating eligibility systems. For example, some local social service agencies have developed systems that synthesize data to improve program and service delivery. Alameda County, CA's Social Services Integrated Reporting System coordinates information across programs including Medicaid, allowing for caseworkers to be able to validate claims and be better able to make service decisions.

Key HIT Implementation Issues at the Local Level

An ideal local health care delivery system would be built around EHRs that allow all providers to securely and appropriately access necessary patient information at the point of care and permit providers to communicate effectively with each other to ensure that care is well-coordinated and managed. The following points highlight some of the priorities of local-level providers in terms of the adoption of EHRs and other broader HIT implementation issues:

Strong federal and state government support for the development and comprehensive integration of health information technologies at the local level and target resources effectively

Collaboration among all levels of government is necessary for successful implementation of integrated health information technologies. Efforts to develop a nation-wide system of EHRs require federal and state government recognition of the importance of meaningfully integrating health information technologies into local health care delivery systems.

Federal and state level policymakers also need to recognize that the capability of local-level providers to implement HIT strategies varies greatly depending on community resources and experience. While some local health care delivery systems have expertise with HIT or HIE through regional health information organizations (RHIOs¹⁰), in many localities a lack of funding and other challenges have created barriers to developing HIT infrastructure and training staff and providers on using HIT. Ensuring that resources are targeted most effectively and offering technical assistance in ways that meet the needs of local providers with differing levels of IT expertise and existing infrastructure will be important for successful implementation of EHRs and other HIT applications at the local level.

Additionally, a lack of interoperability across federally funded systems such as the Special Supplemental Nutrition Program for Women, Infants and Children limits the effectiveness of health information exchange. The federal government should encourage that services funded by separate funding streams are documented in one place through health information exchange.

¹⁰ Regional Health Information Organizations (RHIOs) are health information organizations that bring together health care stakeholders within a defined geographic area and govern health information exchange among them for the purpose of improving health and care in that community. (Definition from the National Alliance for Health Information Technology's report to the Office of the National Coordinator for Health Information Technology, "Defining Key Health Information Technology Terms," April 28, 2008.)

In addition to EHRs, federal and state government support of the implementation of other health information technology tools at the local level is important as well. For example, particularly in rural regions where health care providers may be geographically distant from individuals needing treatment, telemedicine can allow for real-time patient care, chronic disease management, or behavioral health counseling.

Recognition of the important roles of safety net care providers and the needs of the clients they serve

Local-level health care providers play crucial roles as community health care safety net providers and often serve populations that frequently experience problems in accessing health care, are uninsured, and may also have complex health needs. The clients that safety net providers serve are also likely to interact with the local delivery system at a variety of access points rather than have a usual source of care through a single primary care provider. Therefore, successful implementation of EHRs would particularly benefit the populations that local safety net providers serve, offering the potential to provide better treatment and coordinated care for these individuals.

Address local-level provider needs in state health information exchange (HIE) plans and consider the complexity of local health care and public health delivery systems

Using the funding provided through the State Health Information Exchange Cooperative Agreement Program, states are required to develop strategic and operational plans for HIE. Previous efforts to exchange health information at the local level have not focused much on helping safety net providers exchange information across organizations.¹¹ It is important for states to involve local health care providers in the HIE planning process to ensure that local delivery system needs are considered during the design and implementation of the statewide HIEs.

States are expected to convene health care stakeholders to build support for a statewide approach to HIE and address barriers that may affect HIE, particularly those related to interoperability. It will be important for designers of state HIE plans to recognize and take into account the complexity of the local health care delivery system and local public health needs during the design and implementation process of the statewide HIE to ensure interoperability among all systems. Also, supporting and strengthening core public health functions and comprehensive care can also provide cost savings to the health care systems as well as improved health outcomes.

Suggestions from a panel of safety net providers on how federal and state governments and foundations could assist with implementation of HIE at the local level included providing information about best practices so that safety net providers can learn from regions that have more experience. They also indicated direct technical assistance on issues such as governance, workflow and sustainability would be helpful for communities preparing to implement HIE.¹²

Encourage Regional Extension Centers to connect with local-level providers

Regional extension centers (RECs) are tasked with supplying technical assistance for providers and entities planning to implement an EHR and to help providers electronically exchange information. RECs also have a

¹¹ Felt-Lisk, Suzanne, Au, Melanie and Patricia Higgins. 2009. "Health Information Exchange: The Role of Safety-Net Providers." *Mathematica Policy Research, Inc.* Issue Brief, June.

¹² Felt-Lisk, Suzanne, Au, Melanie and Patricia Higgins. 2009. "Health Information Exchange: The Role of Safety-Net Providers." *Mathematica Policy Research, Inc.* Issue Brief, June.

responsibility to support the aspects of meaningful use that relate to transferring information between health care providers and public health agencies.

RECs can serve as an important resource for care providers as well as local health departments that want to develop other information systems to support their clinical activities, and have the potential to be particularly helpful in assisting providers with small practices and smaller, rural hospitals. RECs should recognize that local health care providers will need technical assistance in planning and implementing EHRs and participating in data exchanges, and will have varying degrees of need for assistance. RECs should proactively approach providers in these settings to ensure that they are as engaged as possible in the development and implementation of EHRs.