

MN e-Health Information Technology Adoption Status

Update June 2007

Introduction

The Minnesota e-Health Initiative is charged to assess the level of adoption and use of Health Information Technology (HIT) in different health care settings. This vital information is needed to identify barriers to adoption and utilization and monitor progress toward the 2015 goal of interoperable electronic health records (EHRs) statewide. This report is an update of assessment report published in June 2006.

Background

The attached framework includes 16 domains for assessment. In each domain, estimates for the denominator representing the facilities are presented. This report updates the assessment status with current data for those health care domains where recent data is available.

Methods

Limited data is available on the status for adoption, use and interoperability of EHRs and related types of HIT in Minnesota. This update of the Health Information Technology adoption status was done by reviewing existing data sources, including ongoing national surveys and one-time or regional studies and by collecting information from subject matter experts. Minnesota-specific information on adoption and utilization metrics was used when it was available. For some domains where it was not available and where national level data was considered to be appropriate, the Minnesota estimates are based on national data.

Results

Updated information in this report includes a meta-analysis of EHR adoption nationwide and current survey data for three domains. A library of the updated assessment information has been developed and indexed which identifies the gaps in the knowledge about levels of HIT adoption for specific domains. The update points to progress in adoption for those domains with current data, but, barriers do exist. It is important to note that the barriers shown in this report are similar to the ones identified last year, which underscores the continuing need to address the issues being identified.

Table 1 shows the updated estimates of current HIT use in two key areas, (1) the use of electronic health records, and (2) e-prescribing. The table is organized into a list of domains which represent different types of health care facilities and physicians and nurses.

Discussion and Recommendations

Assessment is essential to monitor progress toward the 2015 goal of interoperable EHRs statewide. This report shows advancements made since last year. The gaps in knowledge about HIT adoption, however, remain significant, pointing to the need for comprehensive and ongoing assessments and improved metrics and mechanisms for measurement.

The Statewide framework for HIT is to assess adoption, use and interoperability. This comprehensive informatics framework needs to be executed and a protocol needs to be defined for a coordinated, systematic approach to measuring HIT diffusion and implementation that builds on this experience. Such information will be helpful in guiding the Minnesota e-Health Advisory Committee in developing a blueprint to achieve its vision of advancing use and interoperability of health information technology in this state.

This report will be updated periodically and is available at <http://www.health.state.mn.us/e-health/>.



The Minnesota e-Health Initiative will accelerate the adoption and use of Health Information Technology to improve healthcare quality, increase patient safety, reduce healthcare costs and enable individuals and communities to make the best possible health decisions.

www.health.state.mn.us/e-health

MN e-Health Information Technology Adoption Status

Update June 2007

Estimated Levels of HIT Adoption in Minnesota (EHR and e-prescribing)

Update of Phase 1 Summary of Health Information Technology Assessment Project

Domain	Facilities	Estimated Level of Adoption of HIT (EHR and e-prescribing)	Adoption Gap/Comment
Hospitals - Acute Care	137 Minnesota Licensed Acute Care Hospitals	The American Hospital Association (AHA) Survey of Hospital HIT Adoption in 2006 assessed availability of EHRs. Data were provided by Minnesota hospital CEOs in an assessment of EHR access to current medical information. Forty percent of Minnesota hospitals (55/137) completed the survey in Fall 2006. In Minnesota, 96% of respondents are actively considering, testing or using IT for clinical purposes. Among the respondents, 9% have fully implemented EHR, 58% have partially implemented EHR and 29% have no EHRs yet. These statistics are comparable to national rates. The national report is available at: http://www.aha.org/aha/content/2007/pdf/070227-continuedprogress.pdf Note: The survey has a low response rate for Minnesota hospitals. The status of HIT adoption in hospitals that did not participate in the survey is not known.	62% of respondents cited initial costs as a barrier to investing in HIT and 27% cited on-going costs as a barrier. Certain types of hospitals such as those that are struggling financially, smaller facilities, and those in rural areas may need more help than others. 36% identified interoperability with current systems as a significant barrier and 46% noted the same as somewhat of a barrier.
- Critical Access Hospitals (CAHs)	80 (these are included as a subset of the above Licensed Acute Care Hospitals)	The Consortium of Rural Health Research Centers Survey in 2006 assessed HIT adoption in Critical Access Hospitals. Sixty-five percent of Minnesota CAHs (52/80), due to their selection in a national random sample, responded. The survey found that nationally, and in Minnesota, CAHs have relatively high use rates for administrative and financial HIT applications, but much lower use rates for a number of clinical applications. The vast majority of CAHs have high speed Internet access, and many CAHs are computerizing radiology, lab, and pharmacy functions. However, in Minnesota only 23% of the responding CAHs are using EHRs, and only 21% were using prescriber order entry. The national summary report of this study is available at: http://www.flexmonitoring.org/documents/BriefingPaper11_HIT.pdf	CAH use rates for several technologies are lower than the overall rates for hospitals reported by the American Hospital Association and others. Acceleration of the adoption process will require addressing the identified barriers.
Hospitals - Non-Acute Care	11	Very limited or no information currently available.	

For more information: <http://www.health.state.mn.us/e-health> or by e-mail: MNe-Health@health.state.mn.us

MN e-Health Information Technology Adoption Status

Update June 2007

Domain	Facilities	Estimated Level of Adoption of HIT (EHR and e-prescribing)	Adoption Gap/Comment
Clinics - Primary care	~650 systems (includes pediatric and women's clinics)	<p>The DOQ-IT Survey of Minnesota Adult Primary Care Clinics is being conducted by Stratis Health in 2007, to assess EHR implementation in MN. As of June 26th, 2007, 65% of the contacted adult primary care clinics have responded to the survey. 68% of them reported that they have implemented or are in the process of implementing an EHR. 22% are considering implementation in the next 12-24 months, and 10% have plans for implementation beyond 25 months or have no plans for EHR implementation.</p> <p>From the survey the top three barriers to implementation were:</p> <ul style="list-style-type: none"> • Lack of capital resources to invest in an EHR • Concern about physician ability to input data into a computerized medical record • Concern about loss of productivity during transition to EHR system. 	<p>The percentage of clinics that have fully implemented or have implementation in progress has increased from 46% in 2005 to 68% in 2007.</p> <p>Small and rural clinics need significant assistance to implement EHR and e-prescribing.</p>
Clinics - Specialty care only	~200	No data is currently available	
Long term care facilities - Nursing Homes	391	<p>~2% - 4% - This is from national estimates. Nursing homes have broad experience with Minimum Data Set (MDS) use. Stratis Health is in process of conducting a survey which seeks to understand the current status of HIT adoption. This report will be updated to reflect current results and can be accessed from the web site of the Minnesota e-Health Initiative at http://www.health.state.mn.us/e-health/.</p>	<p>Few systems have clinical EHR and little interoperability and interconnectivity.</p> <p>Minnesota's nearly 400 nursing homes will have difficulty implementing electronic health record systems without financial support.</p>
Emergency Departments	131	<p>~10-12% - Emergency departments are improving access within the same health system. ~1%-3% - Rarely are emergency departments connected across health systems or clinics.</p>	Most still need timely access to history, medications, tests and other critical information.
Pharmacies	1,350 licensed and located in MN	Most are linked electronically with pharmacy claims and pharmacy benefit managers. Fewer pharmacies are linked to allow e-prescribing by physicians, which is needed for consumer safety.	Most need to add e-prescribing connections for physicians. Limited interoperability.
Home Care and Home Health Agencies	1,436	~25 – 30% of Home Health Agencies/ Home Care use advanced EHR.	Varies by agency. None or limited interoperability between most systems and partners.

For more information: <http://www.health.state.mn.us/e-health> or by e-mail: MNe-Health@health.state.mn.us

MN e-Health Information Technology Adoption Status

Update June 2007

Domain	Facilities	Estimated Level of Adoption of HIT (EHR and e-prescribing)	Adoption Gap/Comment
Local Public Health Departments	91	<p>Most local health departments use one of three major systems but the data sets are not standardized and the systems are not interoperable within departments and between state and other local departments.</p> <p>Data were provided as responses to a Minnesota Department of Health survey of Local Public Health (LPH) Departments in 2004, known as the MN-PHIN Local Public Health Survey. Eighty-five percent (76/91) of Local Public Health Departments (including cities and counties) completed the survey from September 2004 to October 2004. Local Public Health has an approximate total of ~1200 data sets, ~1300 total applications used (4 – 51 per agency), and ~380 locally created (homegrown) applications. About two-thirds of the reporting city/county agencies use one of these applications: CHAMP (31), CareFacts (4), or PH-DOC (19) Only 2% of Local Public Health data applications comply with standards for connecting. LPH uses at least 17 unique State and Federal data applications that do not interconnect.</p>	All local public health departments need to upgrade systems to current standards to achieve interoperability. Limited access to community-specific population information to support community policy decisions.
Clinical Laboratories	174	<p>Primarily, laboratories are using automation and HIT, but only ~11% are able to use current standards for electronic exchange (as of 2001). The Center for Disease Control reports that there are currently eight Minnesota labs reporting electronic data on communicable disease surveillance.</p> <p>Updated data to be available shortly from a lab survey currently being conducted by Minnesota Department of Health.</p>	Improve interoperability and exchange using HL7, LOINC, SNOMED and other standards. Cost cited as major barrier.
Health systems	10-12	~25 – 50% – Health Systems are in many cases doing strategic planning and have investments underway for cross system interoperability. Some have significant investments in operational EHRs (e.g. HealthEast, Health Partners, Park Nicollet, Children's, Mayo, MeritCare, SMDC, Fairview, Allina – large hospitals with clinic sites).	Interoperability limited for exchanging information. Cross system governance structure emerging and policies vary.
Use by Physicians	~16,000	~17.55% – 22.3% is an estimate based upon the number of physicians in the large systems known to be using EHRs. Significant management of process and necessary culture shifts are required for adoption. Physicians frequently need to learn different information systems across facilities.	Large gap for easy-to-use, interoperable systems, financial models and limited training and support. Gap between technical capability and actual skilled use.

For more information: <http://www.health.state.mn.us/e-health> or by e-mail: MNe-Health@health.state.mn.us

MN e-Health Information Technology Adoption Status Update June 2007

Domain	Facilities	Estimated Level of Adoption of HIT (EHR and e-prescribing)	Adoption Gap/Comment
Use by Registered Nurses (RN)	73,032 licensed registered nurses (as of January 1, 2007)	~17% – 22% is an estimate of nurses who are using EHR or e-prescribing, the same rate as physicians. The usage rate varies considerably by facility and amount of access to EHR. Significant management of process and necessary culture shifts will be required for adoption.	Limited informatics training opportunities for nursing. Limited evaluation and research on adoption of best practices.
Use by Persons/ Consumers	~5 Million	In 2006, the estimate was that < 2% of consumers have secure electronic access to their own personal health record such as a list of medications, lab tests, clinical procedures and preventive recommendations. With an increasing number of PHR offerings by the health systems in Minnesota, the current estimate for PHR usage may be higher.	Increasing trend in PHR services being offered. The Minnesota e-Health Initiative has adopted principles on PHRs. Portability of PHR is rare. Consumer education and training on the value of PHR is needed. Need to adopt standards and policy for use.
Telehealth sites	~97	Surveys were mailed to 1,500 sites to assess telemedicine usage in the state as part of the 2007 Minnesota Telehealth Inventory Project being conducted by the University of Minnesota Health Informatics program. As of June 2007, the survey had 610 returns (~40% response rate). Preliminary survey analysis points that 97 sites (15.9% of 610 survey respondents) use telemedicine in some capacity. Of the 513 who did not use, 207 (40.4% of 513) have thought of implementing it. About half of the sites (~52%) that did not offer telehealth services, cited costs as a factor. Of the 97 telemedicine-using sites, 88 had readily identified counties. 17% (15 sites) of telemedicine users were in the 5-county metropolitan area (Hennepin, Ramsey, Anoka, Dakota, Washington counties). The rest 83% (73 sites) were in the Greater Minnesota. Physicians are dependent on timely access to patient data at remote sites, often across institutional boundaries.	Need improved interoperability for patient information. Access in rural setting varies. Phase 2 of survey is being conducted which looks into issues and hurdles.