

Minnesota e-Health Initiative

Report to the Minnesota Legislature 2013

Minnesota Department of Health
February 2013



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Protecting, maintaining and improving the health of all Minnesotans

February 8, 2013

The Honorable Tony Lourey
Chair, Health and Human Services Committee
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The Honorable Tom Huntley
Chair, Health and Human Services Finance Committee
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The Honorable Kathy Sheran
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The Honorable Tina Liebling
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To the Honorable Chairs:

As required by Minnesota Statutes, section 62J.495, this Minnesota e-Health Initiative report outlines progress toward Minnesota's goals for health information technology. Significant advances for 2012 included:

- Achieving the highest rate of e-prescribing use in the nation with 96% of pharmacies actively e-prescribing.
- Making great progress in adoption of electronic health records, including 93% of hospitals and 79% of clinics.
- Releasing a new guide to assist Minnesota providers in achieving health information exchange – a key component to achieving compliance with the Minnesota e-health mandates and requirements to receive federal incentives.
- Administering the \$9.6 million funding for the State Health Information Exchange (HIE) Cooperative Agreement Program to develop the infrastructure necessary to support health information exchange and meaningful use of electronic health records (EHRs).
- Coordinating statewide responses to proposed federal health information technology regulations to ensure that the needs of Minnesota's health care community are adequately addressed in final regulations.
- Providing timely communications to facilitate stakeholder awareness of state and federal activities related to the Health Information Technology for Economic and Clinical Health (HITECH) Act, including meaningful use of EHRs and opportunities for involvement in Minnesota e-Health Initiative policy development activities.
- Performing a comprehensive assessment of Minnesota's status of EHR implementation and convening stakeholders through the Minnesota e-Health Advisory Committee to recommend actions to further the adoption and effective use of EHRs and increase health information exchange statewide.

The Minnesota e-Health Initiative is ensuring that these and many other activities in the public-private sectors across the state are occurring in a coordinated and focused way.

Sincerely,

A handwritten signature in black ink that reads "Edward P. Ehlinger".

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Executive Summary

In 2012, Minnesota achieved many notable e-health milestones, including: state and national recognition for its leading rates of adoption and use of electronic health records (EHR) and secure exchange of clinical data needed for care; national award recognition as a state leader in e-prescribing services; leading outreach services offered through the Minnesota regional extension center (REACH) program; recognition of the Southeastern Minnesota Beacon program as a remarkable community model for effective care coordination; significant resources awarded to providers and communities in need; and more than \$140 million distributed to providers achieving incentives through the Federal meaningful use program.

E-health in Minnesota and the nation remains a very dynamic and rapidly evolving field in health care and public health. Considerable progress is still needed to achieve the benefits and promise of fully interoperable electronic health records in Minnesota. However, the state is well-positioned for further achievements because of the continuing commitment to the public – private collaborative efforts of the Minnesota e-health Initiative and Advisory Committee. Minnesota’s comprehensive e-health assessment information continues to successfully guide the work by identifying gaps and opportunities for progress in 2013 and beyond. Emerging topics for monitoring and action in 2013 include: consumer engagement; privacy and security; population health and public health; and comprehensive care delivery including behavioral health.

Value of e-Health in Minnesota

E-health holds the promise to improve health care quality, increase patient safety, reduce health care costs, improve population health, and enable individuals and communities to make the best possible decisions to improve health. Across the nation, e-health is emerging as a powerful strategy to transform the health care system and improve the health of communities. Minnesota has been on the forefront of achieving widespread adoption and effective use of electronic health records (EHRs) and health information exchange to ensure continuity of care. Minnesota is now the number one state in the nation in e-prescribing, and a national leader in adoption of EHRs.

However, despite our strong progress, in many ways the hard work begins now. Disparities exist for providers that are currently not eligible for federal incentive funds, including specialty providers; behavioral and chemical health; rural, dental and chiropractic clinics; long term care; social services; and public health. Privacy and security issues will create new challenges for providers as exchange of clinical data across providers and settings becomes more common. New ways of leveraging EHRs for quality improvement are developing, leading to a need for additional support to assist providers in understanding how to effectively use the EHR. And with the increasing focus on exchange of clinical information, an infrastructure, standards and protocols need to be implemented to ensure the exchange of information is standards-based and secure.

Federal funding to support Minnesota's efforts to achieve interoperable health information exchange (the ability to share information seamlessly) among providers in the state, as well as other significant federal programs, end by 2014. Without continued support, gaps and disparities in e-health adoption and use will grow and inhibit the ability of providers to support healthier individuals and communities. The real benefit to communities will occur when providers harness the power of their EHR to provide high quality and comprehensive care in a cost effective manner, allowing them to focus on the less costly end of the care continuum – prevention and primary care.

Considerable work needs to be accomplished in 2013 and beyond for achieving the vision of e-health, including Minnesota's 2015 mandate for interoperable (the ability of information systems to exchange data electronically in a way that each system understands what the data are, the meaning of the data, and what to do with it) EHRs. This is true particularly for settings that are not eligible for federal meaningful use incentives and settings for which no or limited certified EHRs are available. Future work also needs to focus on emerging issues, such as consumer education and engagement; privacy and security; health care quality improvement; and healthier communities and populations. The final section of this report highlights recommendations for building upon and expanding the nationally recognized e-health model, including the following:

- Continue to inform and connect health and health care providers and consumers through leadership, collaboration, guidance and assessment:
- Empower consumers and support providers on privacy and security issues.
- Support Minnesota's health care system to improve quality of care through adoption, meaningful use of HIT, and health information exchange across all settings.
- Support Minnesota's state and local public health system to improve population health through adoption, meaningful use of HIT, and public health data exchange with the health care system and other public health agencies.
- Support health care providers in moving towards exchange of clinical data.
- Monitor and study emerging topics and make future Minnesota e-Health recommendations.

Overview of the Minnesota e-Health Initiative

What is e-Health and Why is it Important?

E-health is the adoption and effective use of Electronic Health Record (EHR) systems and other health information technology (HIT) to ***improve health care quality, increase patient safety, reduce health care costs, and enable individuals and communities to make the best possible health decisions.*** Across the nation e-health has emerged as a powerful strategy to transform our ailing health care system.

Minnesota's Approach to e-Health

Minnesota has been a national leader in e-health for many years. In 2004, the Minnesota e-Health Initiative was established as a public-private collaboration to pursue strong e-health policies to accelerate the adoption and use of EHRs and related HIT with a focus on achieving interoperability (the ability to share information seamlessly) across the entire continuum of health care.

Achieving the vision of the Minnesota e-Health Initiative requires a collaborative effort among the intersecting domains of clinical care, policy/research, public health, and consumer engagement. This vision guides the work of the Minnesota e-Health Initiative.

The Minnesota e-Health Vision is to *accelerate the adoption and effective use of Electronic Health Record (EHR) systems and other health information technology (HIT) in order to improve health care quality, increase patient safety, reduce health care costs and improve public health.*



The vision's comprehensive scope includes four domains:

- Consumers
- Clinicians
- Policy/Research
- Public Health

The Initiative's consensus-driven approach seeks to identify and encourage policies and practices that:

- **Empower consumers** with information and tools to help make informed health and medical decisions.
- **Inform and connect health care providers** by promoting the adoption of EHRs, effectively using clinical decision support, and achieving interoperable EHRs.

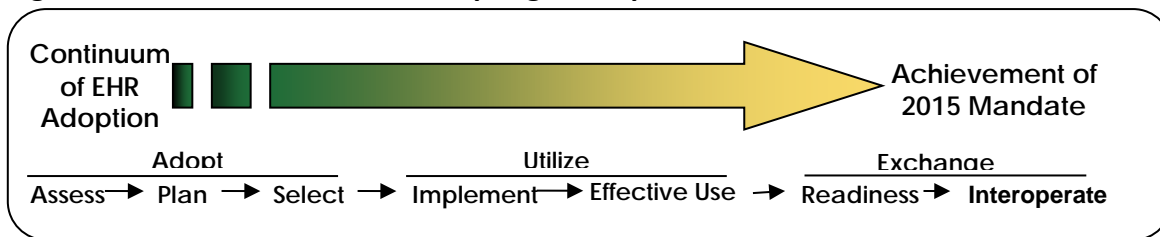
- **Protect communities and improve public health** by advancing efforts to achieve interoperable public health systems and population health goals.
- **Modernize the infrastructure and increase workforce informatics competencies** through adoption of standards for health information exchange; policies for strong privacy and security protection; supporting informatics education, funding and other resources; and assessing and monitoring progress on adoption, use and interoperability.

Minnesota Model for Adopting Interoperable EHRs

In 2008, the Initiative developed the Minnesota Model for Adopting Interoperable EHRs (Figure 1) that is applied to all aspects of the Initiative’s work and policy development. The model has seven steps which are grouped into three major categories:

- **Adopt**, which includes the sequential steps of Assess, Plan and Select.
- **Utilize**, which involves implementing an EHR product and learning how to use it effectively.
- **Exchange**, including readiness to exchange information electronically with other partners, and implementing regular, ongoing exchange between interoperable EHR systems.

Figure 1. Minnesota Model for Adopting Interoperable Electronic Health Records



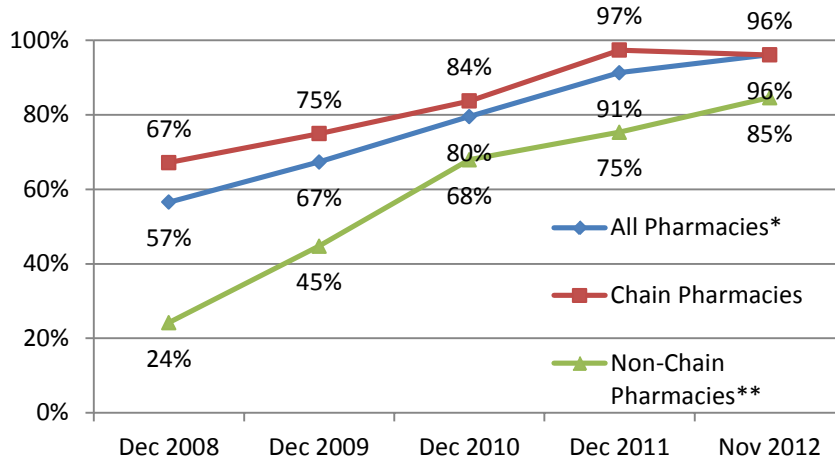
Minnesota Statutes, section 62J.495, required the Commissioner of Health to develop a plan for the state to achieve the statutory mandate that all providers and hospitals have in place “an interoperable electronic health records system within their hospital system or clinical practice setting.” The plan, *A Prescription for Meeting Minnesota’s 2015 Interoperable Electronic Health Record Mandate—A Statewide Implementation Plan*, was developed through the Minnesota e-Health Initiative and released in June 2008. The plan represents a community-wide consensus for advancing interoperable EHR systems in all settings (e.g. clinics, hospitals, local public health, long term care, etc.) across the state.

Success Story: Minnesota Makes Significant Progress on e-Prescribing Rates

In 2012, Minnesota achieved the highest rate of e-prescribing use in the nation with 96% of pharmacies actively e-prescribing, capturing the No. 1 ranking in Surescript’s 7th annual (2012) Safe-Rx Awards (www.surescripts.com/saferx). The rankings are determined through an analysis of data that measures electronic prescribing use by physicians, pharmacies and payers in each state. Some of this success can be attributed to the 2011 e-prescribing mandate, to

meaningful use and the 2011 and 2012 HIE connectivity grant programs. Figure 2 below displays the trend in e-prescribing rates over time, from 2008 – 2012 by pharmacy type.

Figure 2. Trend in e-Prescribing Rates of Pharmacies between 2008 – 2012



*Excludes pharmacies with the pharmacy class of medical device manufacturer

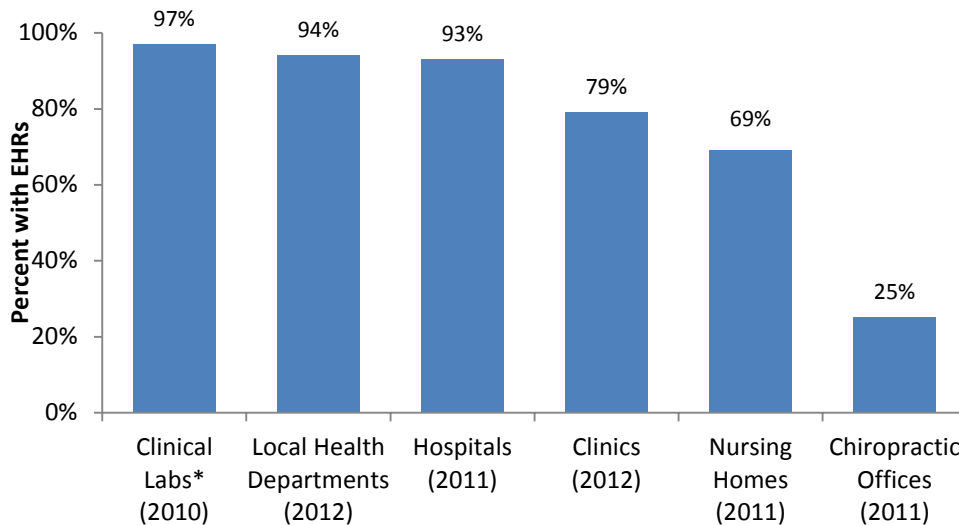
**Includes pharmacies with the pharmacy class of independent, franchise, and government/federal

Source: Office of the National Coordinator, Surescripts

Success Story: Minnesota Providers Making Progress in Using EHRs

Health care providers and hospitals are making great progress in adopting and using an electronic health record, but gaps do remain in certain settings. Figure 3 below shows the percentage of health care providers in Minnesota that have adopted and are using an electronic health record, with hospitals at 93% and clinics at 79%.

Figure 3. Percent of Minnesota Providers Using Electronic Health Records



* Clinical Labs use lab information systems rather than EHRs

Source: Minnesota Department of Health, Office of Health Information Technology

Minnesota e-Health Advisory Committee

Minnesota has made significant progress on e-health issues over the past several years. This level of progress couldn't have been made without the work of the Minnesota e-Health Advisory Committee, a 25-member legislatively-authorized committee appointed by the Commissioner of Health to advise on e-health issues in Minnesota. The Committee comprises a diverse set of key Minnesota stakeholders, including: consumers, nurses, physicians, dentists, pharmacists, payers, public health professionals, vendors, informaticians, Chief Information Officers, and researchers, among others. The Committee is convened quarterly to build community consensus on important e-health issues and advise the Commissioner of Health on policy and common action needed to advance the adoption and effective use of EHRs and statewide interoperability across the continuum of health care in Minnesota. See Appendix A for a listing of current Advisory Committee Members.

Annual Minnesota e-Health Summit

Among the many activities sponsored by the Minnesota e-Health Initiative and Advisory Committee, the annual Minnesota e-Health Summit brings together over 400 key leaders and national experts to share experiences and lessons learned, best practices, knowledge and practical tips, techniques and tools. The goal of the Minnesota e-Health Summit is to provide quality education about emerging national and state e-health trends and issues. In addition to hearing from internationally recognized e-health leaders, attendees discuss policy issues, learn about the progress of innovative projects underway in Minnesota, and get progress reports that highlight statewide activities. The ninth annual meeting will be held June 13th, 2013.

Advancing e-Health through MDH's Office of Health Information Technology

Much of the work of the Minnesota e-Health Initiative, including support for the Minnesota e-Health Advisory Committee, is achieved through the leadership and actions of the Minnesota Department of Health's Office of Health Information Technology and e-Health (OHIT). OHIT activities include coordination with stakeholders, assessment of progress, determination of gaps, program development, and education and training activities. Specifically, OHIT carries out the following responsibilities necessary for e-health progress in Minnesota:

- Overseeing e-health responsibilities assigned to the Department of Health under Minnesota Statutes, sections 62J.495 to 62J.4982, including: recommendations for e-health assessment, strategy development, policy alignment and guidance, e-health standards, and outreach and education activities to Minnesota providers on achieving Minnesota's goal for interoperability.
- Convening stakeholders to create a comprehensive and unified vision for the use of electronic health records and health information exchange in Minnesota.

- Developing and implementing Minnesota’s strategic and operational plan for health information exchange to expand the secure, electronic movement and use of health information among health care organizations using nationally recognized standards.
- Collaborating with other federally-funded programs designed to promote the adoption and use of electronic health records and health information exchange (e.g., Regional Extension Centers, Medicare and Medicaid incentive programs, the State Office of Rural Health and Primary Care).
- Coordinating across state government to maximize federal and state investments in health information technology and infrastructure development (e.g. the Minnesota Department of Human Services, Minnesota Management and Budget, the Minnesota Department of Corrections, the Minnesota Department of Commerce, and Minnesota Information Technology Services).
- Collaborating with other state agencies and community stakeholders on the Minnesota Health Information Technology Trailblazers Project, which has formed a learning collaborative to develop a long-term plan of action for quality improvement in the state.
- Providing expertise in health informatics and EHRs to guide e-health policy development and implementation; support outreach efforts; and provide other technical services.
- See Appendix B for a listing of additional Minnesota e-health resources supported by OHIT.

Recent Successes and Need for Future Investments in e-Health

While there has been considerable e-health progress in the past several years, with the 2015 mandate for interoperable EHRs fast approaching, along with the momentum being set by meaningful use and other federal and state health reform activities, there is much more work to be done in order for Minnesota to remain a leader in e-health. Figure 4 below is a summary of selected Minnesota e-health accomplishments during 2012, and future investments necessary to build on successes and address statewide gaps moving forward.

Figure 4: Selected Key E-Health Successes and Future Needs and Opportunities

| Technical Assistance, Outreach, Communication, Grants and Loans | |
|---|--|
| <p>2012 Successes</p> <p>Provided resources and assistance including:</p> <ul style="list-style-type: none"> ▪ Weekly email update to more than 4,000 stakeholders ▪ Made more than 50 presentations on e-health to greater than 1,000 stakeholders statewide. ▪ Implemented a community Health Information Exchange Connectivity Grant Program, with \$2 million available for financial assistance to health care providers to support their e-health needs around securely exchanging clinical health information. ▪ Developed and promoted a comprehensive guide for health care providers on health information exchange, including the benefits of health information exchange, the Minnesota landscape and approach to health information exchange, and resources for implementation. | <p>Needs and New Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Provide specialized technical assistance and financial assistance particularly for health care settings not eligible for federal meaningful use incentives such as long term care, pharmacies, laboratories, and state and local health departments. ▪ Update Minnesota e-health resources and policy guides to include the latest Minnesota lessons learned. ▪ Establish a consumer engagement program to better support and inform consumers. |
| Privacy and Security | |
| <p>2012 Successes</p> <p>Conducted a study, as requested by the Minnesota Legislature, to provide insight in the steps Minnesota clinics and hospitals take to detect and monitor unauthorized access to patient’s health records and inform patients of unauthorized access (Report due in February 2013).</p> | <p>Needs and New Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Update privacy and security resources, (tools, templates and policies) regarding e-health practices for Minnesota health care community to support their efforts in achieving Minnesota’s goal for interoperability by 2015 and exchange across border states. ▪ Implement training / education programs for consumers and providers regarding EHRs and privacy and security. ▪ Conduct an analysis of perceived and actual barriers to data sharing and recommend changes in Minnesota statutes that would support sharing among unrelated entities (Recommendation from Roadmap to a Healthier Minnesota: Recommendations of the Minnesota Health Reform Task Force, Final Report December 13, 2012). |

| Standards and Interoperability Requirements | |
|---|--|
| <p>2012 Successes</p> <p>Selection of Minnesota by the National Center for Health Statistics to be the first e-Birth Records pilot study state, with the goal of submitting information directly from an EHR to the state birth registry.</p> | <p>Needs and New Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Develop guides and resources for providers on selecting standards, particularly for settings in which no certified EHRs are available. ▪ Disseminate information on national and state activities around standards and interoperability ▪ Training for laboratories for use of recommended standards (LOINC and SNOMED), including technical assistance for mapping of local codes to standard codes for interoperability. |
| Health Information Exchange Oversight (see HIE Oversight Report in Appendix F) | |
| <p>2012 Successes</p> <ul style="list-style-type: none"> ▪ Continued to oversee the implementation of Minnesota’s Health Information Exchange Oversight law by providing five Certificates of Authority to entities authorized to provide secure health information exchange services to health care providers in Minnesota. | <p>Needs and Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Monitoring of national landscape to update Minnesota’s Health Information Exchange Oversight requirements and process as necessary. |
| Interoperability Infrastructure | |
| <p>2012 Successes</p> <ul style="list-style-type: none"> ▪ Developed Minnesota’s Statewide Health Information Exchange Shared Services Collaborative to promote interoperability between Minnesota’s State-Certified Health Information Exchange Service Providers ▪ Convened an advisory committee to review and recommend coordination activities within the Department of Health to ensure state public health programs are prepared for meeting reporting requirements for Stage 2 meaningful use. | <p>Needs and Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Implementation of Statewide Shared Services to support interoperability needs between entities providing health information exchange services statewide, ensuring silos of data do not exist among Minnesota’s State Certified Health Information Exchange Service Providers (including ongoing governance, sustainability, and technical infrastructure). ▪ Continue public health coordination around federal Stage 2 meaningful use requirements, enabling Minnesota health care providers to receive approximately \$500 billion in federal Medicare and Medicaid incentive payments. For this incentive program, reporting to state public health agencies is a required component and coordination among the state health department is essential for ongoing preparedness for future stages of federal meaningful use requirements. |

| Statewide e-Health Profile: Assessment and Evaluation | |
|---|---|
| <p>2012 Successes</p> <p>Implemented a statewide profile of e-health issues around adoption of electronic health records, effective use, and secure health information exchange – assessments included: clinics, hospitals, long-term care facilities, local health departments, and pharmacies.</p> | <p>Needs and Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Resources to assess other settings including dental offices, government agencies, home health care organizations, and others as identified by e-health community |
| Support for MN e-Health Initiative Advisory Committee and Workgroups | |
| <p>2012 Successes</p> <p>Convened Adoption and Use Workgroup to provide recommendations on policy and implementation guidance around Minnesota’s 2015 mandate for interoperable electronic health records.</p> | <p>Needs and New Opportunities</p> <p>Seek funding to continue successful activities and explore new opportunities including:</p> <ul style="list-style-type: none"> ▪ Coordination with State Health Reform activities ▪ Examine gaps in e-health policy relating to: <ul style="list-style-type: none"> - Affordable Care Act, including transitions of care and health care homes - EHR and HIT patient safety actions and surveillance - e-measures policy and reporting |

National e-Health Landscape

The work of the Minnesota e-Health Initiative, its Advisory Committee, workgroups and the Minnesota Department of Health over the past seven years has positioned Minnesota well to successfully leverage Minnesota e-health investments and take advantage of federal funding aimed to improve care coordination, increase patient safety, and improve health outcomes by ensuring that patients have access to their health information when they need throughout the continuum of health care. Because of Minnesota's upfront investment and planning, leveraging of federal funding to support health information technology and health information exchange, health and health care organizations in the state will receive from \$450 - \$800 million in federal incentive payments and further advance Minnesota as a national leader in improving the quality of health and health care with the help of health information technology.

In 2009, Congress passed the Health Information Technology for Economic and Clinical Health Act (HITECH Act). The HITECH Act authorized new financial incentives through the meaningful use incentive program involving Medicaid and Medicare programs (see Appendix C for additional information on meaningful use requirements). The objective is to ensure that the adoption and use of health IT contributes to a more efficient, effective and safe health care system that achieves improved health outcomes.

Federal Meaningful Use Requirements

In order to access federal HITECH incentives, providers and hospitals must demonstrate "meaningful use" of an EHR system. Meaningful use is currently defined by three consecutive stages with each stage having more advanced EHR and health information exchange requirements. As a part of the broader e-health effort, the Minnesota e-Health Initiative views the definition of meaningful use as part of its framework for effective use of electronic health records. This approach recognizes that the real value in EHR systems comes from using them effectively to support efficient workflows and effective clinical decisions, which have a positive and lasting effect on the health of individuals and populations. While meaningful use has laid the foundation nationally and in Minnesota for hospitals and eligible professionals, significant progress is still needed in the areas of effective use and health information exchange as well as other settings not currently eligible for meaningful use transactions.

In addition to the Meaningful Use incentive programs, the HITECH Act provided \$2 billion to the Office of the National Coordinator for continuing health information technology policy and standards development, and the implementation of several additional programs to support providers and hospitals in becoming meaningful users of electronic health records. See Figure 5 for a brief description of each program, the intended purpose and the approximate amount of funding available for Minnesota.

Figure 5: Key Programs Established Under the HITECH Act (2009)

| HITECH Act Program | Minnesota Recipient | Minnesota Funding | Funding Impact |
|---|---|---|---|
| <p>Centers for Medicare and Medicaid Services (CMS) Incentives for “meaningful use”</p> <p>Provides Medicare and Medicaid incentives for certain health care providers and hospitals that meet criteria established by CMS for the meaningful use of certified EHRs. Medicare providers who do not become meaningful users of EHRs will receive penalties in the form of payment reductions beginning in 2015.</p> | <p>Eligible Professionals and Hospitals in Minnesota</p> <p>Department of Human Services – for implementation of Medicaid Incentive Program</p> | <p>\$450-\$800 million* *estimated</p> <p>Medicare funding runs through 2016. Medicaid funding runs through 2021.</p> | <p>Between January 2011 and November 2012, Minnesota hospitals and eligible providers have received \$140,934,790 million in meaningful use incentive payments.</p> <p>Source: Center for Medicare & Medicaid Services, Combined Medicare Medicaid Payments by State.</p> |
| <p>Regional Extension Centers REACH Extension / Outreach center (Minnesota and North Dakota)</p> <p>Provides funding for the establishment of Health Information Technology Regional Extension Centers that offer technical assistance, guidance and information on best practices to support and accelerate health care providers, Critical Access Hospitals and qualifying Rural Hospitals’, efforts to become meaningful users of Electronic Health Records (EHRs).</p> | <p>Key Health Alliance: Stratis Health, The College of St. Scholastica, and National Rural Health Resource Center</p> | <p>\$22,106,318 million</p> <p>Funding ends by February 2014.</p> | <p>Through January 3, 2012, REACH has achieved the following;</p> <p>Milestones by providers;</p> <ul style="list-style-type: none"> ▪ Milestone 1- <u>4,857 Priority Primary Care Providers (PPCPs)</u> signed up for REACH. This equates to 135% of target goal of 3,600. ▪ <u>4,254 PPCPs</u> (or 118% of target) have obtained Milestone 2, which is EHR adoption with e-prescribing and quality reporting. ▪ <u>1,636 PPCPs (or 45%) have obtained Meaningful Use.</u> <p>Milestones by Critical Access Hospitals/Rural Hospitals using that same milestone definitions;</p> <ul style="list-style-type: none"> ▪ Milestone 1= 112/124 or 90%. ▪ Milestone 2= 66/124 or 53%. ▪ Milestone 3= 42/124 or 34%. |
| <p>Health Information Exchange</p> <p>These programs support states in establishing secure health information exchange (HIE) capacity among health care providers and hospitals in their jurisdictions.</p> | <p>MN e-Health Connect</p> <p>Department of Health</p> | <p>\$9.6 million</p> <p>Funding ends February 2014.</p> | <p>5 HIE Service Providers Certified by the State providing HIE services statewide.</p> <p>135 community partners receiving HIE Connectivity Grants.</p> |
| <p>Health Information Technology Workforce Development</p> <p>These grant programs support the development of Curricula, training programs and competency testing for a competent and prepared health</p> | <p>University Partnership for Health Informatics (UP-HI)</p> <p>Students educated in six different HIT roles through two</p> | <p>\$5.1 million</p> <p>Funding ends December</p> | <p>Out of 257 allocated positions, 233 Students enrolled as of 12/31/12. Last enrollment occurs 1/1/13 and completion of last class 12/31/12.</p> |

| HITECH Act Program | Minnesota Recipient | Minnesota Funding | Funding Impact |
|--|--|--|--|
| information technology workforce. | universities (3 campuses) covering the northeast, west, and mid sections of Minnesota. <ul style="list-style-type: none"> - UMN Twin Cities graduate programs (School of Nursing, School of Public Health, Institute for Health Informatics, and Computer science) - UMN Crookston undergraduate program (Computer Science) - College of St. Scholastica) | 2013. | |
| | Normandale Community College | \$1.2 million Funding ends 4/1/2013 | Normandale has successfully trained over 300 Health IT professionals with 160 more currently in pursuit of their 6-month certification for a total of over 450 health IT professionals completed through the grant program as of 3/31/2013. |
| Beacon Community Program Provides funding to communities to build and strengthen their health information technology infrastructure and exchange capabilities to demonstrate the vision of meaningful health IT. | Southeast MN Beacon Community: Mayo & Partners | \$12 million Funding ends September 2013. | 11 counties and local public health departments and 47 school districts, with 100% EHR adoption rate in the project region <ul style="list-style-type: none"> ▪ Stable, Scalable and Sustainable Health IT infrastructure established – expected to affect 2500 providers and 500,000 patients. ▪ Scalable Peer-Peer HIE among all partners. ▪ Community Clinical Data Repository to be a central data source for population management, quality measures and research. ▪ School Portal is ‘live’ to exchange Asthma Action Plans and will expand to all 47 school districts. ▪ Transitions of care pilot between Mayo Clinic and |

| HITECH Act Program | Minnesota Recipient | Minnesota Funding | Funding Impact |
|--|---------------------|--|---|
| | | | Olmsted County PH to reduce hospital readmissions of PH patients. |
| Strategic Health IT Advanced Research Projects (SHARP) Achieving breakthrough advances in health information technology to address key problems such as Secondary Use of EHR Data. | Mayo & Partners | \$15 million Funding ends March 2014. | To enable the use of EHR data for secondary purposes, such as clinical research and public health. Leverage health informatics to: <ul style="list-style-type: none"> ▪ Generate new knowledge ▪ Improve care ▪ Address population needs. To support the community of EHR data consumers by developing: <ul style="list-style-type: none"> ▪ Open-source tools ▪ Services ▪ Scalable software. |

Sustainability Plans & Need for Future Investments/Momentum

Funding for the majority of HITECH funded programs is set to end in either 2013 or early 2014, but there is a continued need in Minnesota to direct the Minnesota e-Health Initiative work to provide the ongoing support to health care providers in achieving or participating in meaningful use as well as achieving Minnesota’s goal for interoperability.

Monitoring National e-Health Activities

In order to stay current with the e-health activities happening nationally, Minnesota Department of Health staff have prioritized several national activities in which to monitor, respond, and actively participate. The table included in Appendix D summarizes several key national activities staff have been involved in to provide a sense for the scope and breadth of activities happening nationally.

State of e-Health in Minnesota

Minnesota is making great strides in advancing e-health in many settings, and evidence continues to grow regarding the positive impact of EHRs for Minnesota consumers, health care providers, and communities. The Minnesota e-Health Initiative monitors the adoption and use of EHRs and the ability to electronically exchange health information among health care providers in a secure manner throughout Minnesota in a variety of settings. This effort, captured in the Minnesota e-Health Profile (a method to uniformly collect and routinely share results of MN e-health assessment activities), assesses and evaluates both the progress and gaps of e-health implementation in Minnesota as well as impact and health outcomes. Minnesota has achieved considerable progress, but much remains to be accomplished.

Minnesota e-health assessment highlights include the following:

- Adoption rates of EHRs are high (ambulatory clinics at 79% and hospitals at 93%) and will likely continue to rise, with specialty clinics lagging behind primary clinic adoption rates.
- Effective use rates for functions such as decision support are low to moderate, but earlier gaps between urban and rural settings are narrowing.
- E-Prescribing by pharmacies has rapidly increased in recent years and is among the highest in the nation.
- Health information exchange rates are low with most exchange occurring between affiliated clinics and hospitals (i.e. hospitals and clinics that are part of the same health network).
- Workforce gaps in skills and knowledge persist in health informatics and technology skills.

Minnesota's Approach for measuring e-Health

The Minnesota e-Health Profile is an established and comprehensive statewide assessment process to uniformly collect and routinely share the results of e-health assessment activities in Minnesota. Minnesota's assessment activities have proven valuable in measuring progress on state and national goals, monitoring advancement towards meaningful use, identifying gaps and barriers, enabling effective strategies and efficient use of resources, and guiding program decisions at the state and local level. The e-Health Profile recognizes a multitude of health domains in which e-health activity can be assessed. Each assessment involves deploying a survey across a subset of priority domains. For example, during 2011-2012 the Profile focused on collecting data from laboratories, pharmacies, clinics and physician offices, hospitals, local health departments, skilled

nursing facilities, and chiropractic clinics. In 2013, assessment efforts will focus on collecting information from pharmacies, clinics, hospitals, local health departments, and dental offices.

The e-Health Profile is built upon existing, tested, and reliable survey tools that are designed to identify progress, gaps and barriers to effective strategies, and efficient use of resources. It measures information at one point in time (cross-sectional), and spans the entire continuum of care in the areas of:

- Adoption of electronic health records and other health information technology.
- Effective use of electronic health records including e-prescribing.
- Exchange of health information.

Further explanation of the survey methodology used for this report can be found in the methodology section of each report, at: www.health.state.mn.us/e-health/assessment.html.

The section below summarizes e-health progress and gaps for Minnesota providers related to adoption, effective use and health information exchange, and identifies the impact and outcomes related to each indicator.

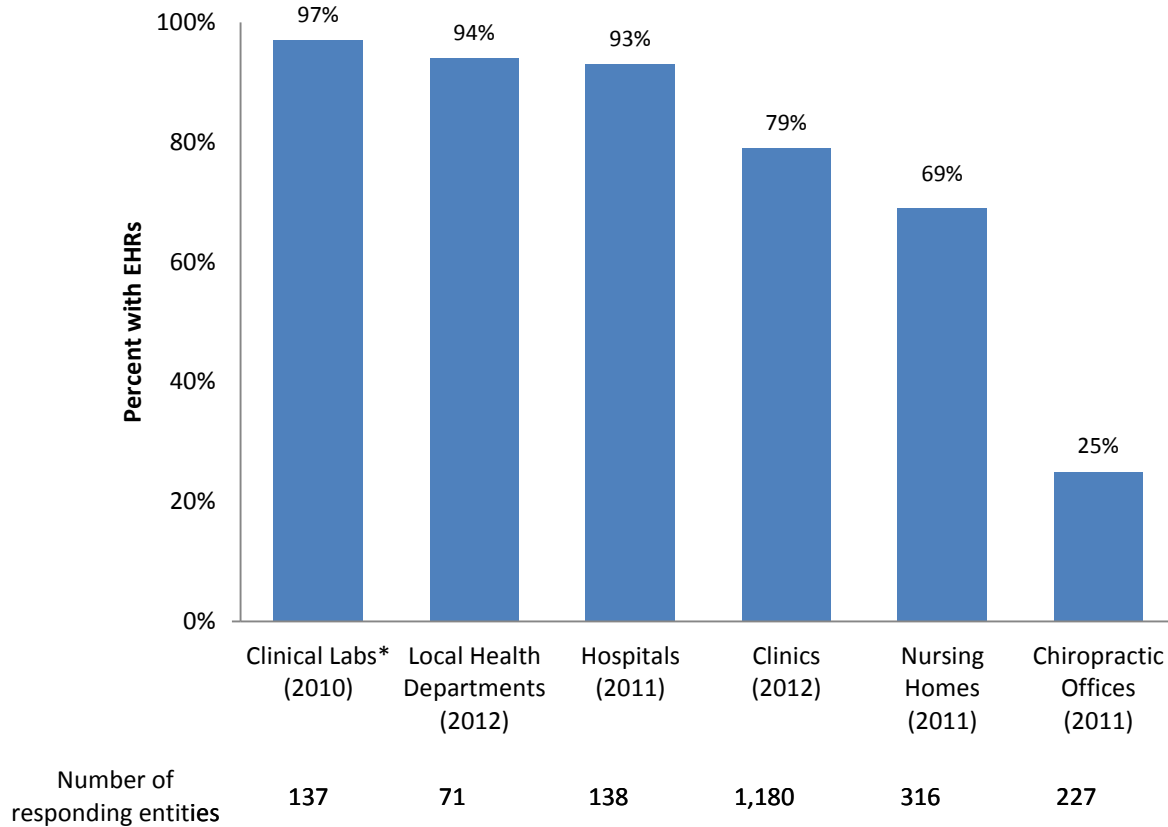
Adoption of Electronic Health Records and Other Health Information Technology

Adoption Summary

- Minnesota has high EHR adoption rates that are expected to continue to increase over time as most facilities without an EHR plan to adopt within the next one to three years.
- Clinics have had the highest adoption rate in recent years, with 67% adopting EHRs in 2011 and 79% adopting in 2012. Specialty clinics have a lower adoption rate than primary care clinics.
- Common challenges to adoption were cost to acquire and staff education, training and knowledge.
- Some settings have no or limited nationally-certified EHR software available, which limits the use of standards and will continue to hinder the ability for effective use and interoperability in Minnesota.

Minnesota has some of the highest EHR adoption rates in the country¹ and for some settings, such as chiropractic offices, clinical labs and local health departments, Minnesota is the only state in the nation to have a consistent methodology to measure EHR adoption rates.

Figure 6. Percent of Minnesota Providers Using Electronic Health Records



* Clinical Labs use lab information systems rather than EHRs

Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html

Figure 6 shows the percent of facilities that have adopted an EHR by provider type. Minnesota hospitals, local health departments and clinical labs have adoption rates of over 90% with most remaining entities planning to adopt or in the process of adoption in the next year. Clinics have made substantial progress toward adoption in recent years, increasing from 67% in 2010 to 79% in 2012. Nursing homes increased from 32% in 2008 to 69% in 2011 (the most recent assessment year for this setting). Recognizing that gaps in adoption rates still exist in these settings we find:

1 U.S Department of Health and Human Services, Office of the National Coordinator for Health IT, Health IT Dashboard. Accessed 11/16/2012

- Seventy-nine percent of clinics (935/1,180) reported adopting an EHR in 2012. This is an increase of 35 clinics from 2011. Four in five non-adopting clinics are specialty clinics that do not offer internal, geriatric, pediatric or ob-gyn services. Of those without an EHR, two-thirds (116/177) plan to adopt within the next three years and the most common barriers to EHR adoption were financial resources, lack of internal knowledge, and lack of technical resources.
- Nursing homes, which were identified as certified licensed nursing homes and certified boarding care homes, more than doubled in the number with EHRs from 94 in 2008 and 217 in 2011. Most (93/99) of the remaining nursing homes without an EHR were in the process of adoption or had plans to adopt in the next 18 months. The largest challenges to EHR adoption, implementation and upgrades were staff education and training, cost to acquire, and effects on workflow.
- Although only a quarter of chiropractic offices had EHRs in 2011, 55% of chiropractic offices without an EHR plan to implement in the next one to three years. The most common barriers to EHR adoption were cost to acquire and return on investment concerns.

It should be noted that chiropractic offices, nursing homes, local health departments, and clinical labs have no or limited nationally certified EHR software available because there aren't national certification programs available for these settings. This limits the use of standards and hinders effective use and interoperability. Looking forward, Minnesota should support EHR adoption, standards and certification for these settings and others such as specialty clinics, home health care organizations and dental offices.

Effective Use of Electronic Health Records

Effective Use Summary

- Effective use rates were moderate to low with disparities existing in rural settings.
- Almost all pharmacies were e-prescribing; 87% clinics and 39% of hospitals were e-prescribing.
- The most common barriers to effective use were staff training, resources to build/implement and staff resistance.

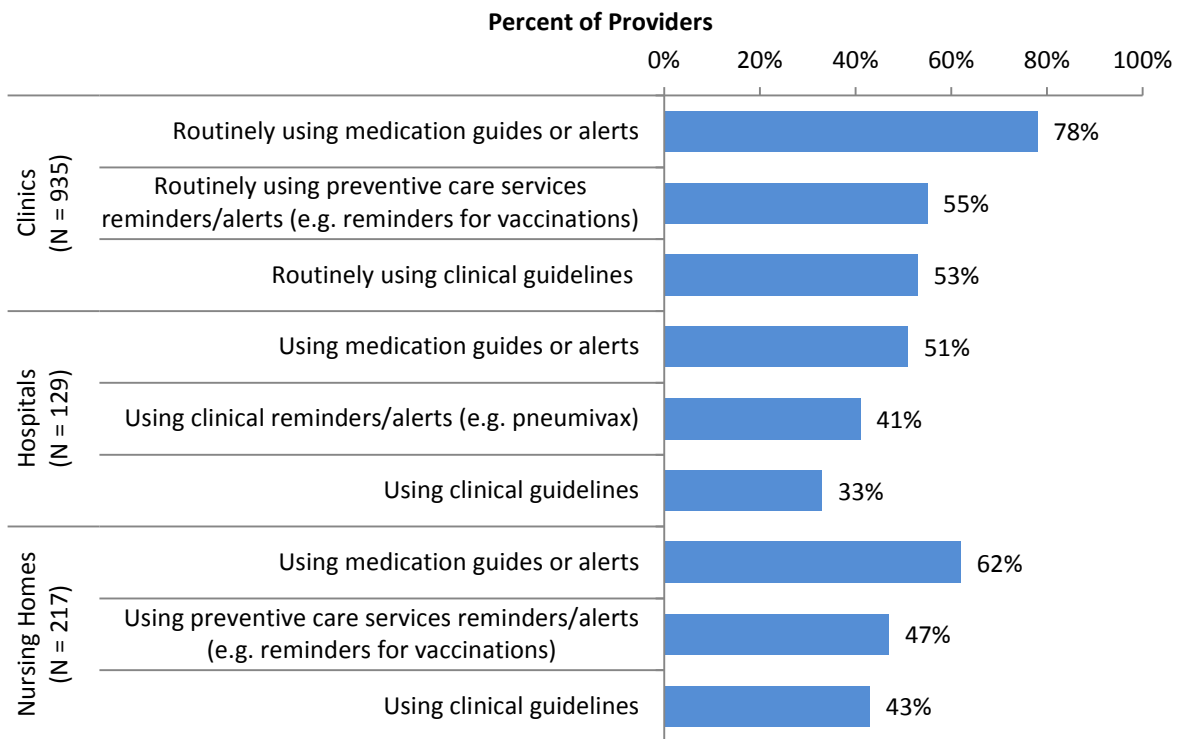
Effective use of EHRs is an important activity to improve the quality and safety of health and health care. However, rates of EHR effective use lag behind adoption rates and vary by care settings and location. Achieving effective use is complex and is impacted by user behavior, organizational processes and practices, and EHR functionality. There are many indicators of

effective use of EHRs available for clinics, hospitals, nursing homes and pharmacies. In this section we highlight these key indicators: clinical decision support, electronic prescribing, and computerized provider order entry.

1. Clinical Decision Support

Clinical decision support refers broadly to providing clinicians or patients with clinical knowledge and patient-related information, intelligently filtered or presented at appropriate times, to enhance patient care. Figure 7 shows key clinical decision support tool indicators in clinics, nursing homes and hospitals. The number of clinics and hospitals using these tools has increased from the previous year, but earlier gaps between urban and rural rates of implementation have declined. For example, 45% (121/270) of rural clinics and 51% (337/665) of urban clinics were routinely using more than three clinical decision support tools. Common challenges to effective use were availability of resources to build/implement and staff training.

Figure 7: Use of Clinical Decision Support Tools Among Providers with EHR Systems



Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html, data from 2011 and 2012 surveys.

2. E-prescribing

The second indicator of effective use is e-prescribing. Electronic prescribing or “e-prescribing” means secure bidirectional electronic information exchange between prescribing providers

(prescribers), pharmacists and pharmacies, and payers or pharmacy benefit managers. E-prescribing improves the quality of patient care because it enables a provider to electronically send an accurate and understandable prescription directly from the point-of-care to a pharmacy. E-prescribing is a way to:

- Improve the quality, safety and cost-effectiveness of the entire prescribing and medication management process.
- Reduce potential adverse drug events and related costs.
- Reduce burden of callbacks and rework needed to address possible errors and clarify prescriptions.
- Increase efficiency of the prescription process and convenience for the patient/consumer.

Research has shown that e-prescribing reduces medication error rates by almost sevenfold in community-based office practices, including near elimination of errors due to illegibility.² A reduction in medication errors due to investments in health information technology and health information exchange from 1997-2007 saved the U.S. Department of Veterans Affairs \$4.64 billion by decreasing drug-event related hospitalizations and outpatient visits.³

The Consumer Story of e-Prescribing

Mr. Carter is being prescribed a new medication by his physician. The physician enters the prescription directly into her computer. Because the physician has access to Mr. Carter's medication history and insurance benefits, she is able to immediately check for medication interactions, medication allergies and other features to ensure that Mr. Carter's medications are safe for him and covered by his insurance. The prescription is sent securely to the computer at Mr. Carter's pharmacy, reducing trips and waiting time.

Minnesota measures the status of e-prescribing in several ways, including pharmacy and provider e-prescribing practices. Figure 8 shows the rate of e-prescribing across several settings. We see high rates of adoption among EHR-enabled clinics (95%) and pharmacies (96%), but lower rates among other settings. As a result of the e-prescribing mandate enacted in 2011, Minnesota has seen a dramatic increase in the rate of pharmacies e-prescribing, from 57% in December of 2008 to 94% in December of 2012. Currently there are just 76 active pharmacies that are not e-prescribing, most of which are non-chain operations. Minnesota's success with this mandate resulted in the number one 2011 Safe-Rx™ Ranking award from Surescripts, the country's largest clinical health information network.⁴ This award recognizes states' leadership and commitment to advancing health care safety, efficiency and quality through the use of e-prescribing.

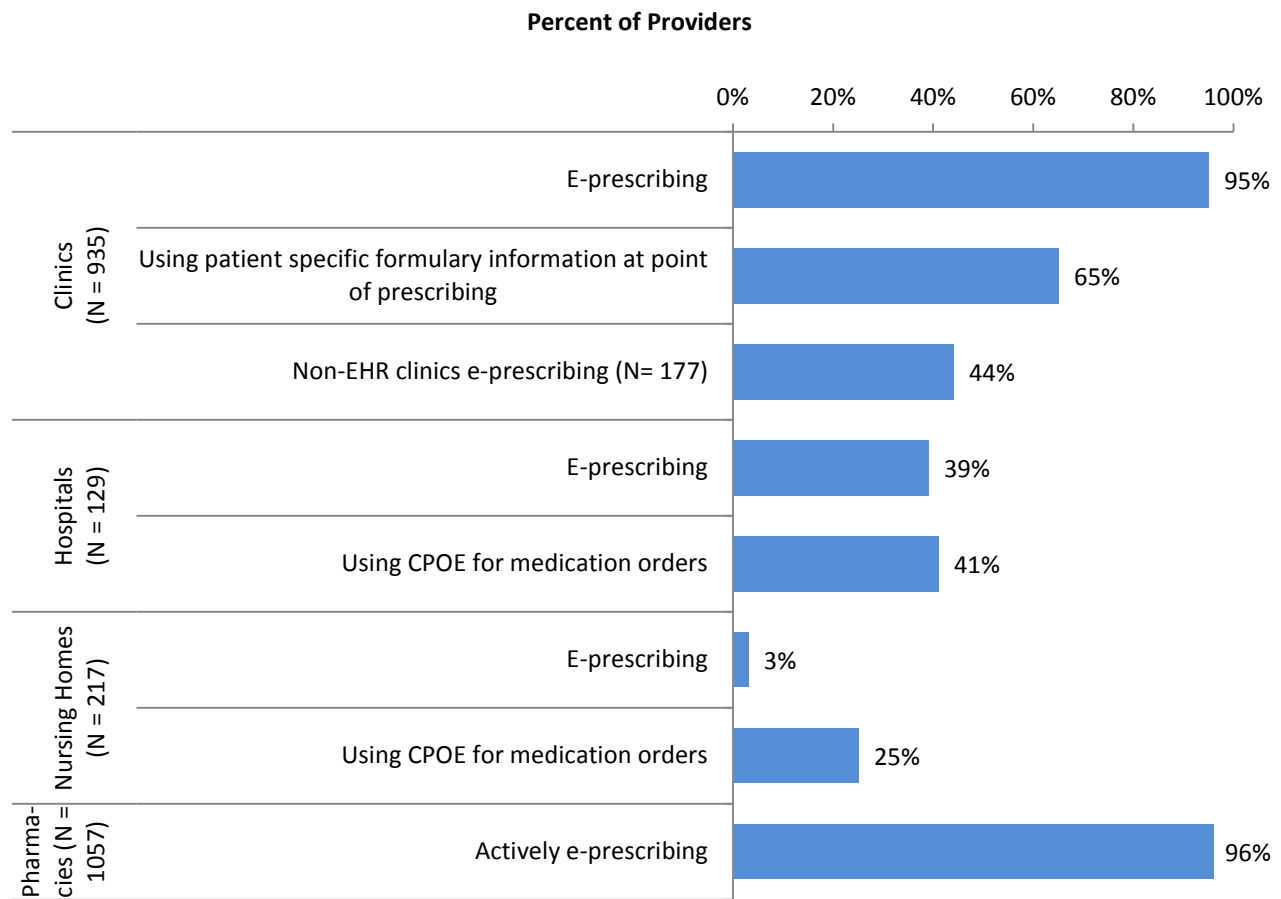
2 Kausha, R., Kern, L., Barron, Y., Quresimo, J., & Abramson, E. (2010). Electronic Prescribing Improves Medication Safety in Community-Based Office Practices. *J Gen Intern Med* 25(6):530-6.

3 Byrne, C. M., Mercincavege, L. M., Pan, E. C., Vincent, A. G., Johnston, D. S., & Middleton, B. (2010). The Value from Investment in Health Information Technology at the U.S. Department of Veterans Affairs. *Health Affairs* 29(4):629-638.

4 Surescripts. The 7th Annual Safe-Rx Awards. National Progress Report 2011. Accessed 11/16/12. www.surescripts.com/saferx.aspx

The other measure of e-prescribing is the rate at which health care providers are e-prescribing. Figure 8 shows the percentage of clinics, hospitals and nursing homes e-prescribing. Similar to use of clinical decision support, rural entities were less likely to e-prescribe. Although only 3% of nursing homes were currently e-prescribing, 51% (110/217) planned to e-prescribe within the next 18 months.

Figure 8. Use of E-Prescribing and Computerized Provider Order Entry (CPOE) for Medications Among Providers with EHR Systems



Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html, data from 2011 and 2012 surveys.

Emerging Issue: Advancing Patient Safety through Effective Use of e-Health Tools

Children’s Hospitals and Clinics of Minnesota is making medication administration safer for their patients by implementing a bar code medication administration (BCMA) that includes not just “pills, shots, and drops”, but also intravenous medications and infusions. By integrating medication orders in the EHR with autoprogramming of the infusion pump, and automatic data transfers from the pump back to the EHR, Children’s innovative work is the most comprehensive application of BCMA in pediatrics in the nation.

An electronic checklist was also implemented to ensure that the six “Rights” were in place for every medication administered. Those six “Rights” are 1) right patient, 2) right medication, 3) right route, 4) right dose, 5) right time, 6) right documentation. This solution has reduced medication errors and prevented potential medication errors that previously went unreported and, in many cases, undetected. The new BCMA system, utilizing the EHR system and other electronic tools, facilitates a level of safety that has not previously been achievable. And, it is reducing costs for Children’s as well as improving patients’/families’ satisfaction with their care.

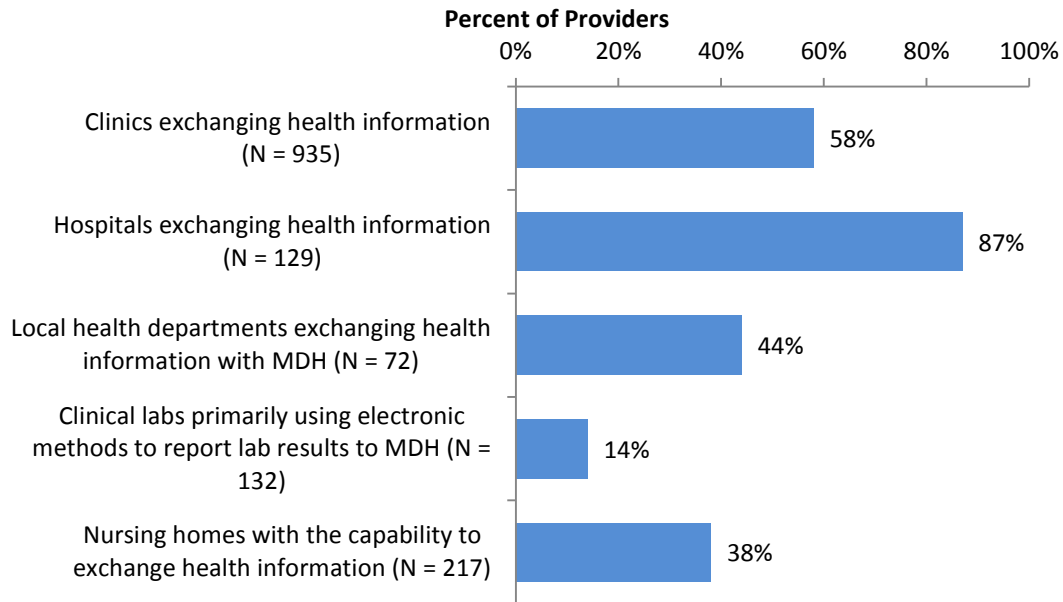
Health Information Exchange

Health Information Exchange Summary

- Health information exchange rates are low, with most exchange occurring between affiliated clinics and hospitals (i.e., hospitals and clinics that are part of the same health network).
- Rural entities are less likely to exchange than urban entities.
- Common barriers to exchange are competing priorities, cost, lack of technical support or expertise and insufficient information on exchange options available.

Health information exchange is the secure electronic exchange of clinical information between organizations using nationally recognized standards. The goal of health information exchange is to help make health information available, when and where it is needed, to improve the quality and safety of health and health care. In Minnesota, many efforts are underway to help achieve the secure electronic exchange of clinical information between organizations using nationally recognized standards. Figure 9 provides a summary of health information exchange among provider settings in Minnesota.

Figure 9. Health Information Exchange Among Providers with EHR Systems



Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html, data from 2011 and 2012 surveys.

In 2011, 87% of hospitals and in 2012 58% percent of clinics electronically exchanged health information with any partners, gradual increases from previous years. The rates decrease for electronic exchange with unaffiliated partners and other providers, which includes nursing homes, hospice and home health providers. Currently, most of the health information exchange happening in Minnesota is primarily between hospitals and clinics in the same system or with affiliated partners. Slightly more than one-third of nursing homes were capable of exchange but routine exchange was limited. In addition, although three fourths of local health departments were electronically exchanging health information, most of the exchange was with the Minnesota Departments of Health and Human Services.

Barriers to Health Information Exchange

There are many reasons why Minnesota health care providers may not be engaging in health information exchange. Barriers to exchange identified through the Minnesota e-health profile vary by setting as summarized in Figure 10, demonstrating the need for continued support to health care providers statewide as they face increasing requirements to participate in health information exchange due to meaningful use, Minnesota’s 2015 mandate for interoperable health records, and federal and state health reform requirements.

Figure 10. Barriers to Health Information Exchange by Setting

| Health Care Setting | Common Barriers to Health Information Exchange |
|--------------------------|--|
| Hospitals and Clinics | <ul style="list-style-type: none"> ▪ Competing priorities ▪ Cost of subscription rates for exchange services ▪ Lack of or difficult access to technical support/expertise |
| Nursing Homes | <ul style="list-style-type: none"> ▪ Capabilities of others to exchange was unknown or limited ▪ EHRs unable to exchange |
| Local Health Departments | <ul style="list-style-type: none"> ▪ Lack of nationally certified EHR systems in the local health department setting ▪ Lack of widespread adoption of common standards by local health departments |

Success Story: Improving Patient Care during Transitions of Care

Mayo Clinic Health System Red Wing recently participated in a Minnesota Hospital Association pilot program to improve patient care when patients are transitioning between care settings, such as between a hospital and a Skilled Nursing Facility. As part of this process, they identified gaps and communication failures that sometimes occur during transitions to new settings and that can compromise patient care. The transition process often included the need for up to three calls to coordinate patient information, and information on discharge medications or the time when pain medication was last administered was not always available for the Skilled Nursing Facility.

In an effort to address these patient safety issues, Mayo Clinic Health System Red Wing revised two discharge screens in their EHR to improve nursing documentation. The new EHR screens include high risk safety concerns related to orientation, speech, hearing, sight, ambulation, feeding, bathing, dressing, as well as other precautions, and are printed off as part of the discharge record. The hospital also created a standardized tool to ensure safe care transitions between Mayo Clinic Health System Red Wing and its local Skilled Nursing Facilities, using a checklist to ensure that needed information is available, reviewed and sent at the time of transfer.

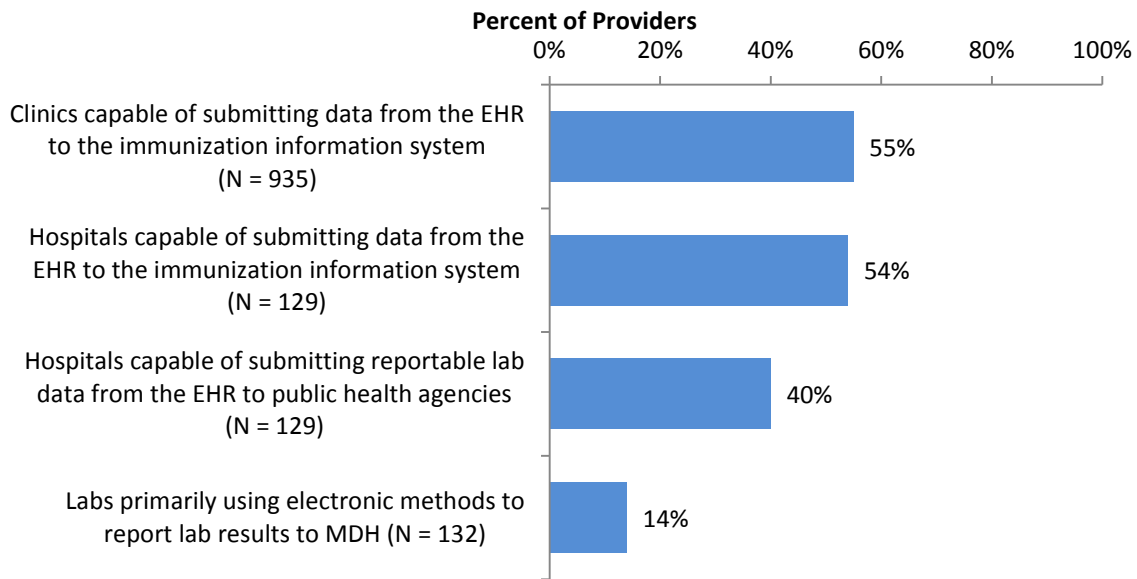
The transitions between patient care settings are smoother as a result of the safe transitions pilot program. Prior to the implementation of these changes the nurse to nurse handoff often involved three or more phone calls to deal with questions related to the patient; this has now been reduced to one or two. Nurses are spending less time on the phone, discharge information is more consistent, and Skilled Nursing Facilities report they are more satisfied with the process as well.

Exchange of Public Health Information

Exchange of public health information involves submitting specific information to the Minnesota Department of Health and other public health authorities to support prevention and control efforts that reduce the burden of mortality and morbidity, improve the delivery of care and save costs. According to the U.S. Department of Health and Human Services, the reporting of both

immunization record data and lab reports to state public health agencies can protect communities from potential disease outbreaks.⁵ When state agencies have access to this data, they can more accurately and efficiently identify gaps in care, especially for underserved populations. It can also allow the agencies to communicate with health care providers on disease outbreaks, effective treatments and disease trends. Figure 11 below describes the current status of exchange of public health information among providers with EHR systems.

Figure 11. Exchange of Public Health Information Among Providers with EHR Systems



Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html, data from 2011 and 2012 surveys.

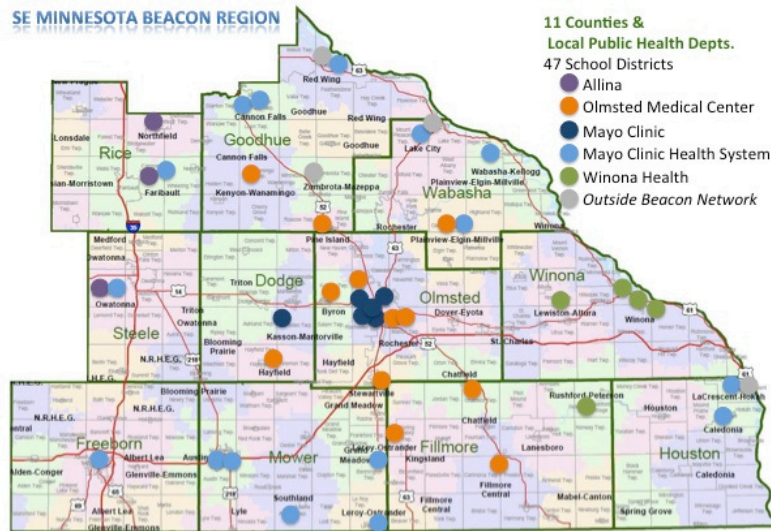
Minnesota e-Health Spotlight: Southeast Minnesota Beacon Community

One of the HITECH-funded programs, the Beacon program, provides federal funding to communities to build and strengthen their health information technology infrastructure and exchange capabilities to demonstrate the vision of meaningful health information technology. Minnesota was fortunate to be the recipient of one of few Beacon project grants. The Southeast Minnesota Beacon Community engages 11 counties and local public health departments and 47 school districts, with 100% EHR adoption rate in the project region. The Southeastern Minnesota Beacon project focuses on two health conditions: childhood asthma and adult Type II diabetes. Both are highly prevalent conditions that are on the rise and that are associated with increased health care costs, restricted lives, downstream illnesses and complications, and loss of time at work or school.

⁵ United States Department of Health and Human Services, Health Resources and Services Administration. <http://www.hrsa.gov/healthit/toolbox/HealthITAdoptiontoolbox/MeaningfulUse/whatistheclinicalcase4objts.html>. Accessed 19 January 2012.

The goal was to understand the scope of these two public health problems, to obtain accurate patient counts to best determine how people are being served and how many might be underserved, and to connect all the health care systems that come in contact with these patients in some way. A major effort of Beacon in Minnesota is to use information technology to create a communication system for coordinating and improving care.

Figure 12. Southeast Minnesota Beacon Community Partners



Source: Southeast Minnesota Beacon Program, <http://semnbeacon.wordpress.com/>

Project Highlight: Transitions of Care

- Peer-to-peer health information exchange now allows public health systems in the region to receive near real-time notifications of patients’ hospitals admissions, discharges, and emergency department use. This information helps public health nurse case managers more effectively follow-up with patients in their home environment.
- The public health nurse case managers can share their in-home assessments with treating physicians and hospital staff. This type of activity is a practical and scalable application of the Beacon infrastructure and could benefit other care providing organizations such as behavioral health and long-term care.

Project Highlight: Pediatric Asthma Early Results

- The proportion of asthma patients (ages 5 to 40) who are assessed annually for triggers, and have a documented asthma action plan, has increased from 17% in 2009 to 27% in 2012. (Number of patients included: 2,725 to 12,188.)
- The proportion of pediatric (ages 5 to 12) asthma patients who have an asthma action plan on file in their school has increased from 26% in 2010 to 76% in 2012. (Number of students included: 1,520 to 2,342.)

Adoption and Use of Standards as a Foundation for Achieving Interoperability

Health data standards are consistent, uniform ways to capture, record, and exchange health data. These e-health standards are necessary for the successful electronic exchange of health information and achieving Minnesota's goal for interoperability by 2015. The goal of e-health standards, coupled with the power of health information exchange, is to be able to electronically move health information securely between disparate systems in order to improve health care quality, increase patient safety, reduce health care costs and improve public health, consistent with Minnesota's principles of health reform. E-health standards are one of many necessary components to achieving interoperability.

While many e-health standards have been developed and recommended nationally, current assessment data indicates there continues to be a need to accelerate the adoption of these nationally recognized standards in a coordinated way in order to advance interoperability statewide.

Summary of Adoption and Use of Standards

- Many national standards exist and the Minnesota e-Health Initiative makes recommendations for standards in Minnesota in order to support providers in achieving interoperability.
- There is an underutilization of Minnesota's recommended e-health standards in many settings and in some settings standards are not yet developed.
- Considerable work is needed regarding standards recommendations to encourage their adoption and use statewide, particularly for settings not directly included in the federal meaningful use EHR incentive program.
- Standards are necessary but not sufficient to achieve interoperability.

Current Status of Standards in Select Minnesota Health Care Settings

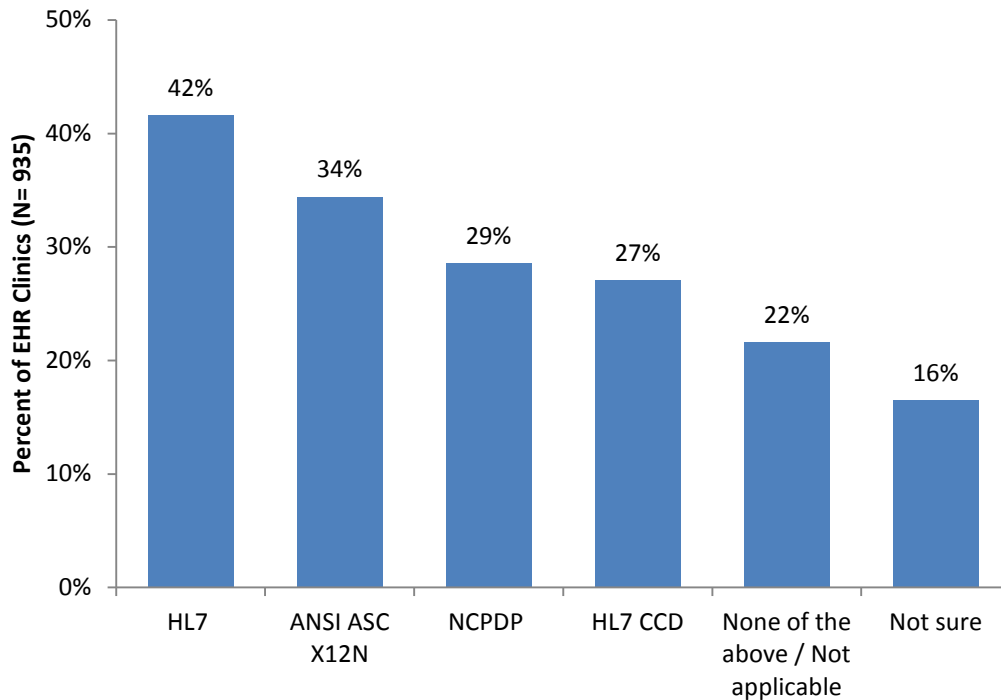
The Minnesota Department of Health conducts a comprehensive e-health profile around adoption and effective use of EHRs and the secure electronic exchange of clinical health information using electronic health records (EHRs) in various health care settings. Described below is the current status of standards status and gaps in various health care settings.

Standards Status and Gaps in Clinics

Many Minnesota clinic EHR systems are not able to generate/receive electronic messages/transactions in standardized format; therefore, this is a key barrier to the electronic exchange of health information. Figure 13 below, which lists the current status of many preferred

standards in the clinic setting, shows that less than half of Minnesota clinics with EHRs are able to use preferred standards that would enable them to be interoperable.

Figure 13. **Proportion of Clinics with EHRs Utilizing Exchange Standards**



Source: Minnesota Department of Health, Office of Health Information Technology, www.health.state.mn.us/e-health/assessment.html

Standards Status and Gaps in Clinical Laboratories

The electronic exchange of structured lab orders and results is an essential piece to achieve the benefits of EHRs and health information technology. The utilization of standards is essential for structured data exchange. Minnesota’s recent clinical laboratory assessment indicates that most Minnesota labs have barriers to exchanging laboratory information in a structured, interpretable way. For example:

- 4% of labs are known to use both LOINC (Logical Observation Identifiers Names and Codes) and SNOMED (Systematized nomenclature of Medical Clinical Terms). LOINC and SNOMED are the recommended standards for laboratory order and results information in exchange of lab reports. Within the next three years, 63% plan to use LOINC while 20% plan to use SNOMED codes for results.
- 13% of labs use electronic methods to send reportable lab results to MDH.
- Two-thirds of labs are able to use HL7 (Health Level Seven) messaging standard (with the older version [v2.3.1] as the most common).
- Workforce knowledge about standards and services to help map local codes or text to standard codes are in the greatest need for interoperability of laboratory information.

Source: Minnesota Department of Health, Office of Health Information Technology, MN Clinical Laboratory Survey of Readiness and Needs for Electronic Health Information Exchange (2011), www.health.state.mn.us/e-health/assessment.html

Minnesota Framework for Recommending e-Health Standards

The Commissioner of Health has the responsibility to identify and recommend standards for health data transactions and the types of information exchanged. The Minnesota e-Health Standards and Interoperability Workgroup, coordinated through the Minnesota Department of Health Office of Health Information Technology, fulfills this requirement.

The Minnesota e-Health Standards and Interoperability Workgroup has developed a framework for accelerating standards adoption which builds on national work and utilizes the power of collaboration and community consensus building (See Appendix E for the Framework). The input to the framework is from national standards activities, standards development organizations, prior standards recommendations, Minnesota e-Health Advisory Committee priorities, the workgroup charge and meaningful use standards recommendations.

Minnesota e-Health Standards and Resource Development

The Minnesota e-Health Standards and Interoperability Workgroup publishes recommendations and resources, which are released annually and published in a guide. The current guide, “Standards Recommended to Achieve Interoperability in Minnesota,” was updated in August 2011, and is available at: <http://www.health.state.mn.us/ehealth/standards/g2standards2011.pdf>.

Ongoing Commitment for Standards Activities

The framework adopted by the Minnesota e-Health Standards and Interoperability Workgroup represents a structured approach for motivating collaborative action statewide and has received national recognition for its role in promoting standards. Standard setting and adoption of those standards is an iterative, ongoing process. Existing standards are continually refined and updated, and new standards will continue to emerge. In short, the work of standards setting, adoption and use is a continuous cycle with the goal of enhancing interoperability.

Future Standards and Interoperability Resource Priorities

While considerable national progress around e-health standards, particularly due to the federal meaningful use incentive program, significant work remains in order to achieve full interoperability as described in the Minnesota e-health vision. Current Minnesota e-health resources are not adequate for addressing future priorities which include:

- Developing **consensus** on needed e-health standards for priority transactions in select settings;
- Creating a **comprehensive current statewide assessment** of standards used in select settings and drafting a **roadmap** for standards adoption and use;

- Providing **resources and technical assistance** for further development of standards in settings that have not been adequately addressed (e.g., local health departments);
- Promoting widespread adoption and use of standards based on national recommendations and the Minnesota interoperable EHR mandate through **communications, education, and outreach** on adoption and use of e-health standards adoption and their role in promoting interoperability statewide; and
- Contributing to development of **federal standards efforts** by active participation and feedback to solicitation of comments and shaping up national standards recommendations
 - Response to Notice of Proposed Rule Making (NPRM) related to Stage 3 meaningful use criteria and related standards/certification is one of the key ones for 2013
 - Participation in national standards activities such as various initiatives of the Standards and Interoperability (S&I) framework including the Public Health Reporting Initiative (PHRI).
 - Responding to solicitation of input around certification of HIT products and their testing.
 - Championing for certification of software in settings where one doesn't exist such as local health departments.

Health Information Exchange as a Necessary Component for Interoperability

In addition to widespread adoption and use of e-health standards, in order to achieve full interoperability, additional requirements must be met regarding health information exchange under Minnesota's Health Information Exchange Oversight Law. A current status of those requirements is described in Appendix F on Minnesota's Health Information Exchange Oversight Law.

Targeted Assistance to Minnesota Health Care Providers

The Minnesota Department of Health's Office of Rural Health and Primary Care (ORHPC) promotes access to health care in rural and underserved communities. Regular coordination with ORHPC programs and activities helps ensure that resources effectively support providers in rural and underserved communities to achieve meaningful use and capacity for health information exchange.

OHIT and ORHPC have directly collaborated on federal and state grant and loan programs specifically targeted to rural and underserved communities in order to leverage the grant-making expertise available in ORHPC and ensure that limited financial resources are targeted appropriately. Those include the \$8.3 million *e-Health Grant Program* (2006- 2008), the current \$6.3 million revolving *Electronic Health Record Loan Program* and the federally supported *Connectivity Grants for Health Information Exchange Program*, described further below.

Minnesota EHR Revolving Loan Program

The Minnesota EHR Loan Program⁶, administered by the MDH Office of Rural Health and Primary Care, began with \$6.3 million in 2008, for financing and supporting interoperable electronic health records in rural hospitals, community clinics, primary care clinics in towns with populations under 50,000, nursing facilities and other health care providers. Loans are required to be repaid in six years at zero percent interest. In the initial round, seven loans totaling \$6.3 million was awarded in 2008 - 2009 to four critical access hospitals, two rural clinics and one urban community clinic.

Repayments to the revolving account allowed the program to re-open in early 2011, with approximately \$1.2 million available. And, in addition, eligibility expanded to include urban providers. Eleven applications were received; seven loans were awarded in 2011 to safety net providers including three critical access hospitals, one rural community clinic, two urban community clinics and one long-term care organization.

Another round of loans is anticipated for 2013 and beyond as additional repayments occur. Changes for 2013 include priority for nursing facilities in subsequent years. The number of loans and maximum loan amount is dependent upon the available funds.

Minnesota e-Health Connectivity Grants for Health Information Exchange

With funding under the State Health Information Exchange Cooperative Agreement Program, the Minnesota e-Health Connectivity Grant Program for Health Information Exchange provided small grants to 1) help clinics, hospitals and other providers of health and health care in Minnesota

⁶ Minnesota Statutes 62J.496

achieve health information exchange capability, and 2) increase the number of Minnesota pharmacies capable of accepting electronic prescriptions.

2011 Program

The 2011 Minnesota e-Health Connectivity Grant program provided grants to 65 community partners, providing a total of \$451,998 in grant funds (see Appendix G for additional details).

2012 Program

The Minnesota e-Health Connectivity 2012 Grant Program guidance and applications were released in July 2012. This program will be focused on connectivity gaps identified through Minnesota e-health assessment activities.

The 2012 Minnesota e-Health Connectivity Grant Program is designed to expand community-based collaborative HIE efforts by providing funding to: a) assist health care providers meet requirements for federal incentives for meaningful use of an EHR and/or b) expand health information exchange capability among health care providers and other trading partners to support care and/or public health, and/or c) increase the number of Minnesota pharmacies able to accept electronic prescriptions. Building on the 2011 program, in 2012 the 2012 Connectivity Grant Program focuses on promoting collaborative efforts in communities, and moving from planning for clinical data exchange to actual implementation.

Two or more organizations coming together in a collaborative effort in their communities to implement health information exchange for meaningful use transactions are eligible for the program. For example, community HIE partners may be a local or regional group of eligible organizations, a health care system, an EHR vendor user group or accountable care organization. Each partner organization site was eligible for up to \$25,000 in grant funds. The organizations must represent at least two of the following types of health care settings: primary care clinics, hospitals, community clinics, pharmacies, Rural Health Clinics, Federally Qualified Health Centers, dental clinics, chiropractic offices, behavioral health clinics, health care homes, specialty clinics, skilled nursing facilities, home health providers, local health departments and other providers of health or health care services for which HIE would improve care.

As of December 31, 2012, ten applications were received so far for the 2012 program. Nine applications were approved for a total of \$1,246,081 in grant funds. Grant project participants include a wide range of health and health care providers from primary care and mental health clinics, hospitals, pharmacies, nursing homes, and local health departments. While focused on health information exchange for meaningful use, the projects reflect a broad approach to health information exchange that will allow communities to meet a broader set of health information exchange needs. For more information, see Appendix G.

Looking Ahead

Minnesota's EHR grant and loan programs have helped Minnesota's small health care providers move toward adoption and effective use of EHRs by addressing a central barrier: lack of capital. Minnesota state government has been a leader in responding to that barrier. Funds for implementation of electronic health records have helped small providers get ready to achieve meaningful use of their EHR, be prepared to access significant Medicare and/or Medicaid incentive payments under HITECH (ARRA), and avoid possible Medicare penalties for failure to achieve meaningful use.

The need for capital to make the necessary investments in EHRs and other HIT remains high. Continued investment will assist Minnesota's small health care providers to achieve interoperable electronic health records across the continuum of care, meet federal meaningful use requirements and recoup investments through Medicare-Medicaid meaningful use incentive payments.

Minnesota e-Health Recommendations for 2013 and Beyond

While Minnesota has made considerable progress in e-health in recent years through a focused effort on the adoption and effective use of EHRs and other HIT, including national recognition in adoption and use of electronic health records, utilization of e-prescribing services, and securing federal resources to further advance the e-health vision in Minnesota, significant work remains. With federal resources ending and the importance of health information technology on health care transformation, there is an urgent need to extend the successful programs that work in Minnesota.

Achieving Minnesota's 2015 mandate for interoperable EHRs as well as its vision to *accelerate the adoption and effective use of Electronic Health Record (EHR) systems and other health information technology (HIT) in order to improve health care quality, increase patient safety, reduce health care costs and improve public health* will be challenging to accomplish with diminishing federal resources. Continued focused investments in e-health can position Minnesota to remain a leader in innovative, high-quality, efficient delivery of health care. Below is a summary of e-health recommendations where future resources are needed for 2013 and beyond.

- 1. Continue to inform and connect health and health care providers and consumers through leadership, collaboration, guidance and assessment:**
 - a. Continue statewide leadership of the public-private Minnesota e-Health Advisory Committee to develop recommendations and standards to address gaps, barriers and disparities.
 - b. Provide guidance to providers to achieve adoption and effective use of EHRs and health information exchange including standards to improve individual/population health outcomes.
 - c. Assess and measure status of Minnesota's providers and identify gaps, barriers and disparities to enable effective strategies and efficient use of resources.
 - d. Implement a consumer engagement and e-health program that helps consumers to understand how they can use e-health to improve their health status and health care experience.
 - e. Continue MDH's regulatory role in health information exchange oversight to ensure core standards and best practices are met among entities providing health information exchange services in Minnesota, by replacing federal funding that will end in 2014. Continuation may require updating requirements as identified in Appendix F.

- 2. Empower consumers and support providers regarding privacy and security**
 - a. Implement an e-health privacy and security program, including provider and consumer outreach and education to disseminate best practices and standards.

3. Support Minnesota’s health care system to improve quality of care through adoption, meaningful use of HIT, and health information exchange across all settings.

- a. Support providers in identifying required standards and requirements for settings in which gaps and disparities exist for adoption and use of EHRs (i.e. nursing homes, pediatric clinics, dental clinics and home health agencies).
- b. Provide technical assistance to achieve core standards for meaningful use (e.g., exchange of lab results, immunization information, medication history, allergies and care summaries) to improve individual and population health outcomes.
- c. Provide grants or other financial assistance to health care settings where gaps and disparities exist or for those in the continuum of care not eligible for federal funds or incentives.
- d. Develop a state government vision and roadmap for strategic use of health information technology, consistent with national and state trends and standards.

4. Support Minnesota’s state and local public health system to improve population health through adoption, meaningful use of HIT, and public health data exchange with the health care system and other public health agencies.

- a. Provide ongoing health informatics technical assistance to state and local public health programs to achieve bi-directional exchange of health information with their partners using national standards.
- b. Provide financial assistance to local health departments for EHR adoption, use and exchange (e.g., lab results, immunization, medication history, allergies and care summaries).

5. Support health care providers in moving towards exchange of clinical data.

- a. Identify status and barriers to sharing clinical information and opportunities for enabling exchange.
- b. Support providers in developing a detailed statewide road map to achieve the exchange and use of clinical data (e.g., priority transactions, policy, statutory, or rule changes necessary).
- c. Provide technical and financial assistance for implementing the exchange and use of clinical data.
- d. Continue leadership and financial assistance for developing statewide shared services for health information exchange to support interoperability requirements of Minnesota’s State-Certified Health Information Exchange Service Providers.

6. Monitor and study emerging topics and make future Minnesota e-Health recommendations.

- a. Emerging topics include: consumer education and engagement; privacy and security; health care quality improvement; and healthier communities and populations; and patient safety.

Appendices

Appendix A

Minnesota e-Health Advisory Committee Members – (2012-2013)

| | |
|---|--|
| <p>Bobbie McAdam Advisory Committee Co-Chair Senior Director, Business Integration Medica Representing: Health Plans</p> | <p>Marty Witrak, PhD, RN Advisory Committee Co-Chair Professor, Dean School of Nursing, College of St. Scholastica Representing: Academics and Research</p> |
| <p>Alan Abramson, PhD Senior Vice President, IS&T and Chief Information Officer HealthPartners Representing: Health Plans</p> | <p>Thomas A. Baden, Jr. Director, Office of Enterprise Architecture Minnesota Department of Human Services Representing: Minnesota Department of Human Services</p> |
| <p>Laurie Beyer-Kropuenske, JD Director Community Services Divisions Representing: Minnesota Department of Admin.</p> | <p>John Fraser CEO ApeniMED, Inc. Representing: Health IT Vendors</p> |
| <p>Raymond Gensinger, Jr., MD Chief Medical Information Officer Fairview Health Services Representing: Professional with Expert Knowledge of Health Information Technology</p> | <p>Sue Hedlund, MA Deputy Director Washington County Public Health Representing: Local Public Health Departments</p> |
| <p>Maureen Ideker, MBA, RN Director of Telehealth Essentia Health Representing: Small and Critical Access Hospitals</p> | <p>Mark Jurkovich, DDS, MBA Dentist Gateway North Family Dental Representing: Dentists</p> |
| <p>Paul Kleeberg, MD Clinical Director Regional Extension Assistance Center for HIT Representing: Physicians</p> | <p>Marty LaVenture, PhD, MPH Director, Office of Health IT and e-Health Minnesota Department of Health Representing: Minnesota Department of Health</p> |
| <p>Jennifer Lundblad, PhD President and Chief Executive Officer Stratis Health Representing: Quality Improvement Organization</p> | <p>Charlie Montreuil Vice President, Enterprise Rewards and Corporate Human Resources Best Buy Co., Inc. Representing: Health Care Purchasers</p> |
| <p>Kevin Peterson, MD Family Physician Phalen Village Clinic Representing: Community Clinics and FQHCs</p> | <p>Peter Schuna Director of Strategic Initiatives Pathway Health Services Representing: Long Term Care</p> |
| <p>Peter Pytlak, MBA Chief Patient Experience Officer Mayo Clinic Health System SW MN Region Representing: Health Care Systems</p> | <p>Stuart Speedie, PhD, FACMI Professor of Health Informatics University of Minnesota Representing: Academics and Clinical Research</p> |
| <p>Steve Simenson, BPharm, FAPhA President and Managing Partner Goodrich Pharmacy Representing: Pharmacists</p> | <p>Joanne Sunquist Chief Information Officer Hennepin County Medical Center Representing: Large Hospitals</p> |

| | |
|---|---|
| <p>Cally Vinz, RN Vice President, Health Care Improvement Institute For Clinical Systems Improvement Representing: Clinical Guideline Development</p> | <p>Donna Watz, JD Deputy General Counsel Minnesota Department of Commerce Representing: Minnesota Department of Commerce</p> |
| <p>Bonnie Westra, RN, PhD Associate Professor University of Minnesota, School of Nursing Representing: Nurses</p> | <p>Ken Zaiken Consumer Advocate Representing: Consumers</p> |
| <p>Kathy Zwig Associate Publisher & Editor-in-Chief Inside Dental Assisting Magazine Representing: Clinic Managers</p> | <p>Cheryl M. Stephens, MBA, PhD Executive Director Community Health Information Collaborative Ex-Officio Exchange Liaison</p> |

Appendix B

Other Minnesota e-Health Resources

The Minnesota e-Health Initiative workgroups and Advisory Committee, supported by the MDH Office of Health Information Technology, develop resources for health and health care providers, consumers, and other stakeholders on standards for clinical data exchange, clinical support programs, patient privacy requirements, and maintenance of the security and confidentiality of individual patient data. As a part of its ongoing efforts, the Minnesota e-Health Initiative will continue to conduct research, publish guidance and provide resources, and make information available on the Minnesota e-Health website, www.health.state.mn.us/e-health. In addition, the Minnesota Department of Health has implemented ways to strategically communicate and disseminate current information and inform stakeholders. A few key communications and educational activities from 2012 are listed below.

- *Weekly Update:* The Minnesota e-Health Initiative e-mails a Weekly Update that is a synthesis of e-health related news, significant meetings and other relevant information intended to provide health related professionals with a Minnesota perspective on local and national health information technology activities. In 2012, the number of Weekly Update subscribers increased by over 300 individuals, from 3,889 readers to 4,213.
- *Summit:* The Eighth Annual Minnesota e-Health Summit, held on June 14, 2012, had a capacity crowd of approximately 420. The keynote speaker was Seth Foldy, Director of the Public Health Informatics and Technology Program Office at the Centers for Disease Control and Prevention *who spoke on National Perspectives to advance e-Health through Recovery Act opportunities, and highlighted how Minnesota has positioned itself for success. Tools, tips, resources and lessons learned were shared from successful projects in Minnesota in 12 breakout sessions led by over 60 local speakers.*
- *Presentations:* MDH staff from the Office of Health Information Technology supported the Minnesota e-Health Initiative by giving more than 50 presentations at various conferences and meetings held by Minnesota and national organizations and associations, such as the Aging Services Institute, Clinical Laboratory Collaborative, State Government EHR Summit and many others.

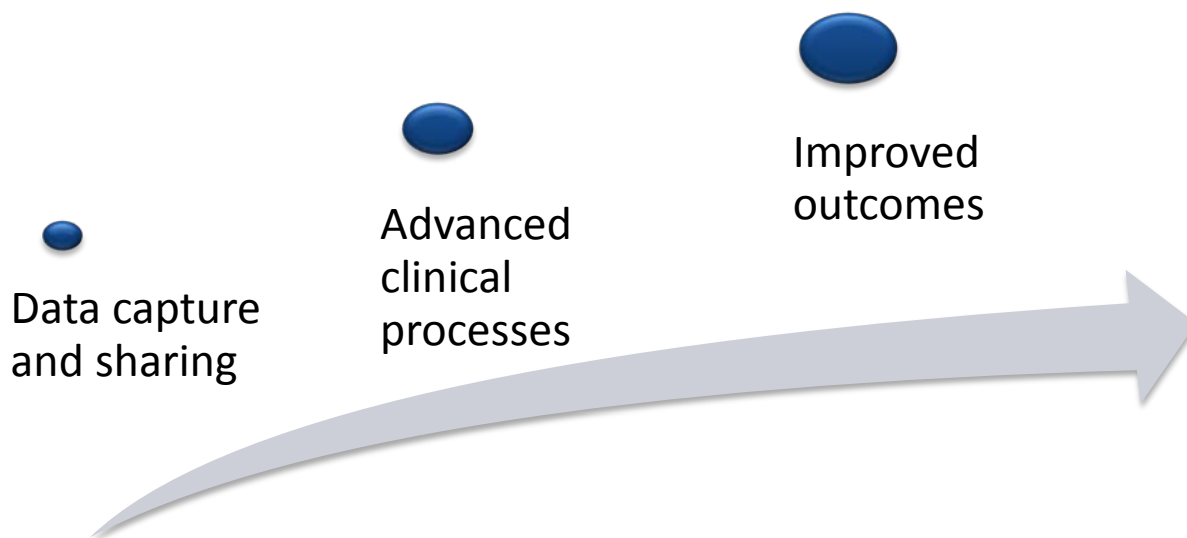
Appendix C

Meaningful Use of Electronic Health Records

Meaningful Use Accelerates EHR adoption and Use in Minnesota Clinics and Hospitals

In order to access federal HITECH incentives, providers and hospitals must demonstrate “meaningful use” of an EHR system.

Figure 1. Three Stages of Meaningful Use



Three initial stages of meaningful use have been defined with the following areas of focus:

- **Stage 1** focuses on: 1) capturing health information in a coded format, 2) using the information to track key clinical conditions; 3) communicating captured information for care coordination purposes; and 4) reporting of clinical quality measures and public health information.
- **Stage 2** criteria were proposed to expand upon Stage 1 criteria in the areas of disease management, clinical decision support, medication management, support for patient access to their health information, transitions in care, quality measurement, research, and bi-directional communication with public health agencies. Stage 2 meaningful use requirements will begin in the fall of 2013.
- **Stage 3** criteria will likely focus on achieving improvements in quality, safety and efficiency, focusing on decision support for national high priority conditions, patient access to self-management tools, access to comprehensive patient data and improving population health outcomes.

- **Future Stages** have not been determined at this time however it is likely they will be needed to fill unmet needs from stages 1-3.

The definition of meaningful use at each stage is important because it is a key measure that determines provider eligibility to receive incentive funds and has an impact on Minnesota providers and hospitals. The Minnesota e-Health Advisory Committee and related workgroups are actively monitoring meaningful use proposals and will be providing comment at every opportunity to ensure the needs of Minnesota's stakeholders are conveyed to federal policy-makers.

Appendix D

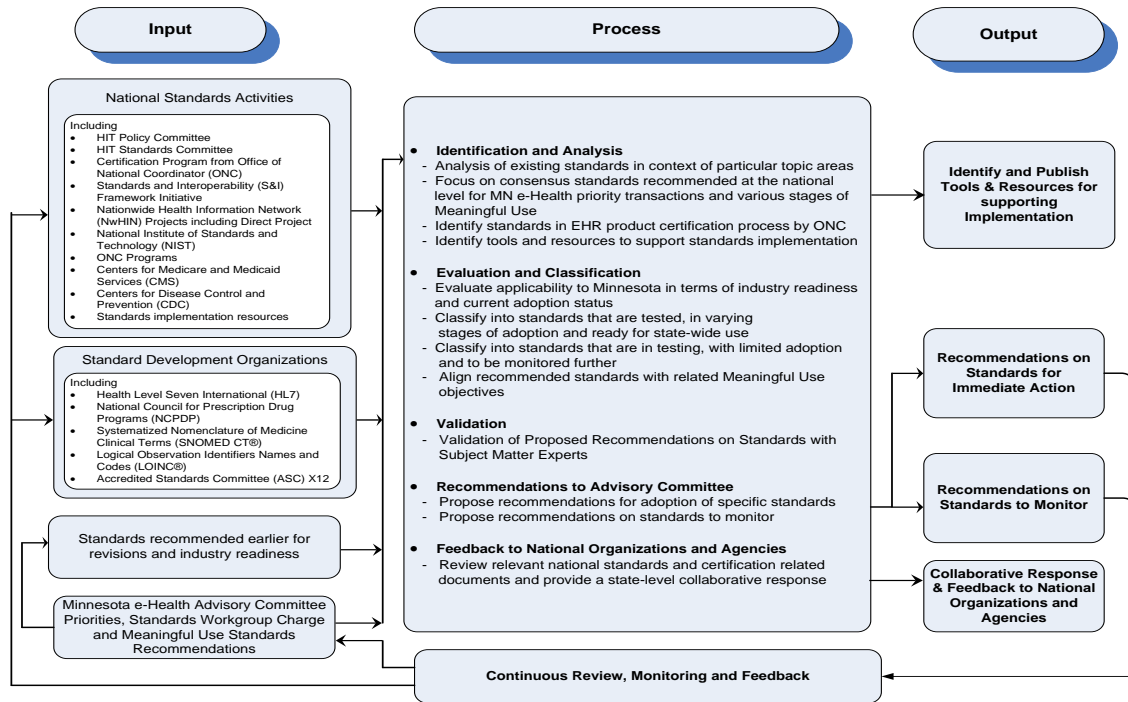
Summary of MDH OHIT and MN e-Health Participation in National Activities

| MDH Staff Participation on or Monitoring of National Advisory Committees, Task Forces, and Workgroups | |
|---|---|
| <i>Name of Workgroup or Advisory Committee</i> | <i>Organization Convened By</i> |
| American Immunization Registry Association, Standards and Interoperability Workgroup, Real-time Exchange Workgroup, Bi-directional Exchange Workgroup | American Immunization Registry Association |
| Clinical Decision Support Process, Communications, and Sustainability Group | Centers for Disease Control and Prevention |
| National e-Health Initiative | National e-Health Initiative |
| Health Information Technology and Public Health Technical Expert Panel | Assistant Secretary for Planning and Evaluation (ASPE), NORC at the University of Chicago |
| Guidance for Cancer Surveillance – Readiness for Meaningful Use Stage 2 | Centers for Disease Control and Prevention |
| Health Information Technology Policy Committee | Office of the National Coordinator for Health Information Technology |
| Health Information Technology Standards Committee | Office of the National Coordinator for Health Information Technology |
| Health Information Technology Trailblazer States | Office of the National Coordinator for Health Information Technology and National Association for State Health Policy (NASHP) |
| Institute of Medicine – Expert testimony on learning health system and population health. | Institute of Medicine |
| Lab Community of Practice | Office of the National Coordinator for Health Information Technology |
| Nationwide Call on Meaningful Use to Promote Collaboration within Public Health | Centers for Disease Control and Prevention |
| National Electronic Lab Reporting Workgroup | Centers for Disease Control and Prevention |
| Nationwide e-Health Collaborative | |
| EHR-IIS Interoperability Community of Practice | Centers for Disease Control and Prevention |
| Multi-State Communications Group | Minnesota Department of Health & Missouri Department of Health |
| Public Health Reporting Requirements Taskforce | Centers for Disease Control and Prevention and Office of the |

| | |
|---|--|
| | National Coordinator for Health Information Technology |
| State HIE Privacy and Security Community of Practice | Office of the National Coordinator for Health Information Technology |
| Public Health Meaningful Use Community of Practice | Office of the National Coordinator for Health Information Technology |
| Public Health Reporting Initiative | Office of the National Coordinator for Health Information Technology, Standards and Interoperability Framework |
| State Level Health Information Exchange Coalition | Manatt Health Solutions |
| Minnesota e-Health Coordinated Responses to Federal Rule Making | |
| <i>Name of Coordinated Response</i> | <i>Submission Date</i> |
| Public Comments for Proposed Rule for Electronic Health Record Incentive Program Stage 2 | May 5, 2012 |
| Public Comments on the 2014 Edition EHR Standards and Certification Criteria Proposed Rule | May 7, 2012 |
| ONC Request for Information on Nationwide Health Information Network Governance | June 11, 2012 |
| Request for Comments on Health Information Technology Policy Committee Meaningful Use Stage 3 Recommendations | January 11, 2013 |

Appendix E

Minnesota e-Health Initiative Approach for Recommending e-Health Standards



Appendix F

Implementation of Minnesota's Health Information Exchange Oversight Law

Enactment of Minnesota Law

In May 2010, Minn. Stat. §§62J.498-4982 (the “Minnesota HIE Oversight Law”) was enacted, which codified many of the recommendations of the e-Health Advisory Committee. In passing this law, Minnesota became one of the first states in the country to devise and implement an oversight program for entities wishing to facilitate the exchange of electronic clinical health record information between health care providers, facilities and related entities (such as pharmacies and labs) in Minnesota.

The HIE Oversight Law has many benefits for Minnesota health and health care providers and consumers, including:

- Ensuring that information follows the patient across the full continuum of care;
- Preventing the fragmentation of health information that can occur when there is a lack of interoperability or cooperation between health information exchange service providers;
- Ensuring that organizations engaged in health information exchange are adhering to nationally recognized standards;
- Ensuring that health information exchange service providers properly protect patient privacy and security; and
- Ensuring that Minnesota has a reliable health information exchange infrastructure in place to allow Minnesota providers and hospitals to achieve meaningful use incentives.

Under the new law (Minnesota Statutes §§ 62J.498-62J.4982), the Commissioner of Health is responsible for ensuring that public interests are protected in matters pertaining to health information exchange. Specifically, the Commissioner is authorized to:

- Establish the process for applying for a certificate of authority, and review and act on applications from HIE Service Providers seeking certificates of authority to operate in Minnesota;
- Provide ongoing monitoring to ensure compliance with certification criteria;
- Respond to public complaints related to HIE services; and
- Take enforcement action as necessary to ensure compliance with the law.

Minnesota Statutes §§ 62J.498 sub. 2(a)(5) and 62J.4982 sub. 4(b) require the Commissioner of Health to provide a biennial report on the status of health information exchange services in Minnesota and provide recommendations on further action necessary to facilitate the secure

electronic movement of health information among health providers that will enable Minnesota providers and hospitals to meet meaningful use exchange requirements.

Implementation of the Minnesota HIE Oversight Law

Effective July 1, 2010, all organizations that provide HIE services for the transmission of clinical “meaningful use” transactions must apply for a certificate of authority to operate in Minnesota, in accordance with Minnesota Statutes §§ 62J.498-62J.4982. There are two categories of health information exchange service providers that require certification:

- Health Information Organization (HIO): An entity must apply for a Certificate of Authority to operate as an HIO if it provides all electronic capabilities for the transmission of clinical transactions necessary for “meaningful use” of electronic health records in accordance with nationally recognized standards.
- Health Data Intermediary (HDI): An entity must apply for a Certificate of Authority to operate as an HDI if it provides health information exchange services for the transmission of one or more clinical transactions necessary for hospitals, providers or eligible professionals to achieve “meaningful use” of electronic health records. Examples of an HDI include an entity that provides the infrastructure to connect computer systems or other electronic devices used by health care providers, laboratories, pharmacies, health plans, third-party administrators, or pharmacy benefit managers to facilitate the secure transmission of health information, including pharmaceutical electronic data intermediaries as defined under Minnesota Statutes § 62J.495.

NOTE: An entity would not be considered an HDI if it only exchanges health record information electronically through direct connection between the electronic health record systems of health care providers without the use of a health data intermediary.

Application and Public Hearing Process

Based on the statutory requirements in the Minnesota HIE Oversight Law, MDH established a formal application process for HIOs and HDIs to follow in order to obtain a certificate of authority to operate as an HIE service provider in Minnesota. Detailed information about the application process can be found on the MDH- Office of Health Information Technology (OHIT) website at www.health.state.mn.us/divs/hpsc/ohit/certificate.

Status of HIE Service Provider Application Submissions to Date

Since the application process was opened in September 2010, MDH has received applications from two HIOs and four applications from HDIs. Currently, in Minnesota, there five State-Certified

Health Information Exchange Service Providers, including one HIO and four HDIs. See the current list of State-Certified HIE Service Providers at:

<http://www.health.state.mn.us/divs/hpsc/ohit/certified.html>.

MDH has initially identified additional companies that may be engaging in HIE activities in Minnesota that would require them to apply for an HIE Service Provider Certificate of Authority. MDH has sent correspondence to these entities to alert them of the requirements under the Minnesota HIE Oversight Law and will continue to take enforcement action as needed to ensure compliance with the Minnesota HIE Oversight Law. MDH will continue to monitor the marketplace to identify new entities that are subject to the law.

Recommendations Regarding HIE Services in Minnesota

Based on the application process experiences over the past two and a half years and the rapidly evolving market place involving electronic health information exchange services, MDH, in consultation with the HIE Review Panel and the workgroups of the e-Health Advisory Committee, have identified several areas where future policy considerations and changes in HIE Oversight may be warranted to adequately meet the needs of Minnesota citizens and providers.

1. Changes in the market place since the Minnesota HIE Oversight Law was first enacted, and definitions of certain terms at the federal level imply the need for clarification of Minnesota's oversight law, specifically:
 - a. Industry announcements indicate that there will be some HDIs that have the capacity to provide the full range of clinical meaningful use transactions. This implies the need for a modification in the definition of an HDI to acknowledge this market reality and clarify that HDIs may obtain a certificate of authority to provide services for all transactions required for meaningful use of electronic health records, and not just a subset of those transactions.
 - b. The recently established Nationwide Health Information (NwHIN) Direct Secure Messaging Protocol introduces a new type of health information exchange service providers into the market place. This development has led to the need for Minnesota to clarify that the definition of an HDI includes Health Information Service Providers (HISP) as defined by NwHIN Direct Project: An entity that is responsible for delivering health information as messages between senders and receivers over the Internet, providing qualified users with access to NwHIN Direct services.
 - c. The NwHIN Direct Project, and Minnesota's use of the term "direct exchange" in the statute has proved confusing for stakeholders and health information exchange service providers in determining how the requirements of 62J.498-62J.4982 apply to their organization. To provide the necessary clarification on this issue, it is

necessary to update the definition of “Direct” exchange to reconcile the differences and between the state and federal use of the term, and clarify that to the extent that “Direct” exchange is facilitated by a HISP those entities facilitating the exchange would be subject to the requirements of HDIs under 62J.498-62J.4982.

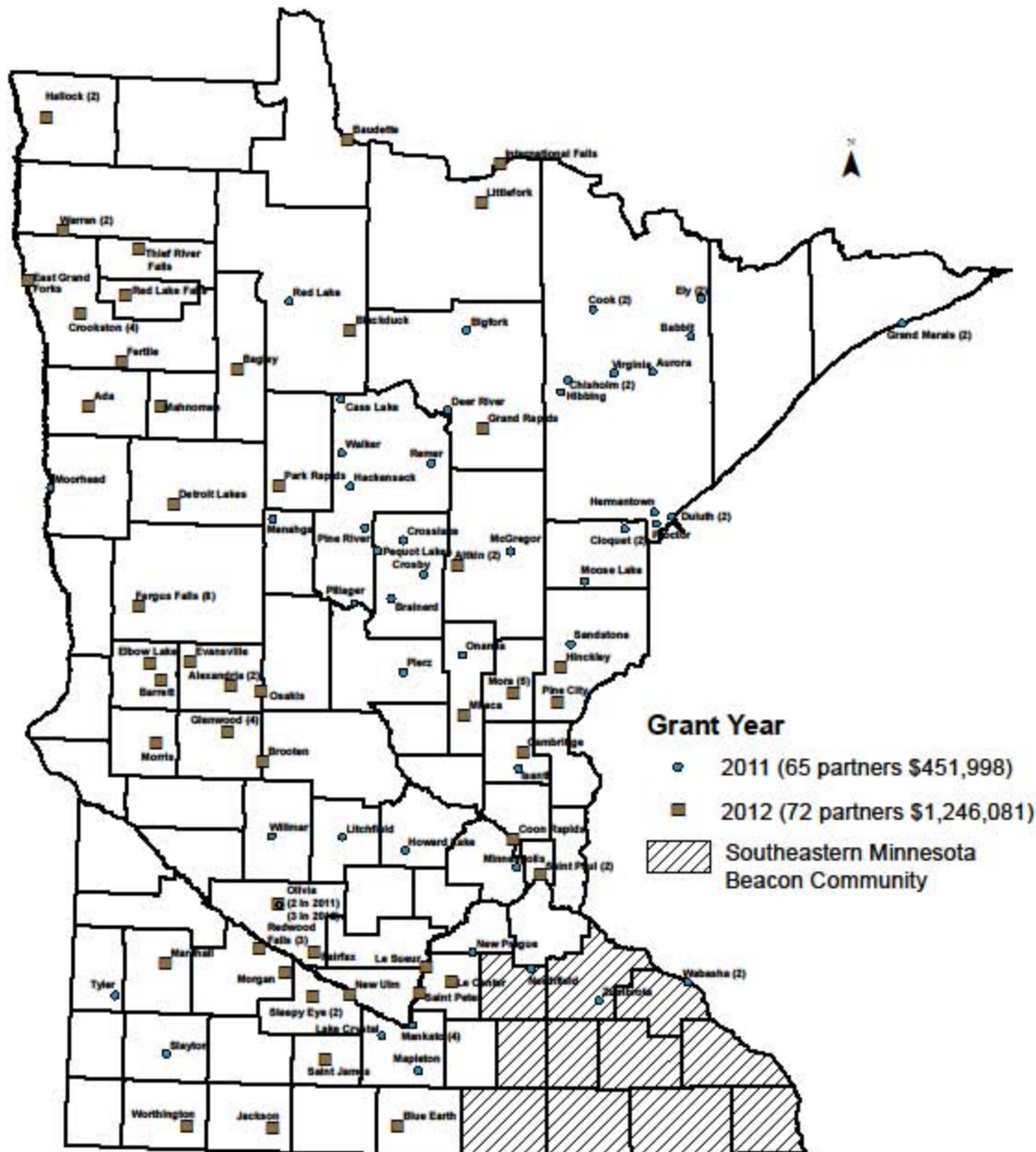
- d. Current language in the statute that outlines minimum criteria for HDIs including the requirement for HDIs to have a record locator service (RLS) that is compliant with the requirements of Minn. Stat. §144.293 sub. 8. This language has been confusing to stakeholders because the definition of meaningful use allows for health care providers and hospitals to meet health information exchange through transactions that do not require the use of an RLS. An update in the language is warranted to clarify that the requirement for HDIs to have an RLS applies only to situations when an RLS is necessary for conducting the meaningful use transactions, and that the HDI may fulfill this requirement through a connection to the RLS of a state-certified HIO or other mechanism sufficient to locate a patient’s records to facilitate the exchange of health information across the continuum of care.
2. Establish more uniform and streamlined statutory requirements for certification of HIOs and HDIs in Minnesota.
 - a. Uniform application criteria and requirements for nonprofit HIOs and for-profit HDIs would create a more level playing field, while adjusting certification requirements to better reflect the business transactions occurring in the HIE market place.
 - b. Uniform application fees and certification fees for HIOs and HDIs might also be warranted.
 3. Health information exchange services are a relatively new offering in the marketplace, and organizations offering these services are in the early stages of development. Recognizing that the requirements established by the HIE Oversight Law are also new in the marketplace, a clarification in the law specifying that, in situations where an applicant has successfully demonstrated compliance with federal and state privacy laws, and that appropriate consumer and provider protections are in place, the Commissioner of Health has the authority to issue a provisional certificate of authority based on the Applicants agreement to meet certain requirements or conditions within specified time frames.
 4. The current HIE Oversight Law requires the Commissioner of Health to hold public hearings as each complete application for a certificate of authority is filed. Revisions to grant the Commissioner of Health the authority to establish deadlines and hold quarterly Public Hearing dates for the review of HIE Service Provider Applications would allow for a more uniform and efficient use of department resources and time donated by expert stakeholder

representatives who serve as members of the HIE Review Panel, and would provide a more predictable timeframe for applications.

5. Require State-Certified HIE Service Providers to participate in Statewide Shared Services, which may include using Minnesota's Statewide Shared Services reciprocal agreement to meet Minnesota's reciprocal agreement requirement.
6. Update Minnesota privacy requirements related to HIE Oversight to better align with federal privacy and security framework (conduct deeper gap analysis and incorporate additional requirements, as necessary, into the application and re-certification process).
7. Align with federal certification programs to allow those programs to meet at least part of Minnesota's requirements as a way to assist with simplifying Minnesota's process and enabling consistency nationwide.

Appendix G

Minnesota e-Health Connectivity Grant Program for Health Information Exchange 2011 and 2012: Cities with Partner Organizations



Appendix H

Glossary of Selected Terms

e-health

e-health is the adoption and effective use of Electronic Health Record (EHR) systems and other health information technology (HIT) to improve health care quality, increase patient safety, reduce health care costs, and enable individuals and communities to make the best possible health decisions. Across the nation, e-health is emerging as a powerful strategy to transform the health care system and improve the health of communities.

Electronic Health Record (EHR) Systems

An Electronic Health Record is a computerized record of a person's health history over time, typically within and for a single health organization. EHR systems increasingly include tools that assist in the care of the patient or result in greater efficiency, such as e-prescribing, appointments, billing, clinical decision support systems, and reports. Because of such tools, EHR systems are much more than just computerized versions of the paper medical chart. Proper planning and implementation of an EHR system can typically take six-24 months in clinics, and three years or more in a hospital.

e-Prescribing

e-prescribing means secure bidirectional electronic information exchange between prescribers (providers), dispensers (pharmacies), Pharmacy Benefits Managers, or health plans, directly or through an intermediary network. E-prescribing encompasses exchanging prescriptions, checking the prescribed drug against the patient's health plan formulary of eligible drugs, checking for any patient allergy to drug or drug-drug interactions, access to patient medication history, and sending or receiving an acknowledgement that the prescription was filled.

Health Information Exchange (HIE)

Health Information Exchange is the electronic, secure exchange of health information between organizations/information systems. The term can also be used to represent a regional or statewide organization whose purpose is to facilitate and support information exchange between member organizations.

Health Information Technology (HIT)

Health Information Technology means tools designed to automate and support the capture, recording, use, analysis and exchange of health information in order to improve quality at the point of care. HIT is a broad term that includes EHR systems (see above), e-prescribing, Personal Health Records, digital radiologic images, tele-health technologies, and many others.

Health Informatics

Health informatics is the science and art of ensuring that health information systems are designed and used in ways that truly support health professionals in improving the quality and safety of care, and of improving the health of populations.

Interoperability

Interoperability is the ability of information systems to exchange data electronically, such that each system “understands” what the data are, the meaning of that data, and what to do with it. In everyday terms, interoperability is what is meant by the phrase, “computers can talk to each other.”

Meaningful Use

Meaningful use defines the use of electronic health records and related technology within a health care organization, as defined by the Centers for Medicare and Medicaid Services (CMS). Achieving meaningful use helps determine whether an organization will receive payments from the federal government under either the Medicare Electronic Health Record Incentive Program or the Medicaid Electronic Health Record Incentive Program.

Minnesota e-Health Initiative

The Minnesota e-Health Initiative is a public-private collaborative that represents the Minnesota health and health care community’s commitment to prioritize resources and to achieve Minnesota’s mandates. The initiative is legislatively authorized and has set the gold standard nationally for a model public-private partnership.

Regional Extension Centers

Regional Extension Centers refers to entities that have received federal funding through the Health Information Technology for Economic and Clinical Health (HITECH) Act to provide technical assistance to health care providers and hospitals in the implementation and meaningful use of electronic health records. The Regional Extension Center for Minnesota and North Dakota is REACH (Regional Extension Assistance Center for Health IT).

Standards

Health data standards are consistent, uniform ways to capture, record and exchange data. Standards are a necessary component to achieve interoperability (see above). The various types of standards include Terminology (how data such as lab results and diagnosis are coded in uniform ways), Messaging (how data are sent in ways that the receiving system can understand what’s coming in), Transactions/claims (to receive payment), and Data Content (common definitions and codes, such as for race and ethnicity).

The full Minnesota e-Health Glossary is available online at <http://www.health.state.mn.us/e-health/glossary.html>.

For More Information:



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