Accelerating e-Health in Minnesota

Report to the Minnesota Legislature 2007

Minnesota Department of Health

January 29, 2007

MINNESOTA MDH DEPARTMENT OF HEALTH

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MINNESOTA MDH DEPARTMENT OF HEALTH

Protecting, maintaining and improving the health of all Minnesotans

January 29, 2007

Dear Minnesota Legislators:

The attached report, *Accelerating e-Health in Minnesota*, identifies the progress, challenges and opportunities to achieving statewide adoption of interconnected electronic health records (EHR) and related health information technology.

In 2005, the Minnesota Department of Health convened the Minnesota e-Health Initiative Advisory Committee. The vision for the Minnesota e-Health Initiative is to accelerate the use of Health Information Technology to improve healthcare quality, increase patient safety, reduce costs, and enable individuals and communities to make the best possible health decisions.

This vision encompasses a comprehensive statewide health information infrastructure that includes and supports the domains of clinical medicine, population health, personal health, and research and policy. The population health dimension is demonstrated by this committee's close coordination with the Minnesota Public Health Information Network (MN-PHIN) project, a statewide initiative to ensure public health information systems effectively support rapid detection and response to community health threats and are upgraded so that public health can fully be part of the e-Health Initiative.

We are very encouraged by the enthusiasm and commitment of so many who are working to address critical and complex issues that will truly improve the health of all Minnesotans while reducing healthcare costs. I want to acknowledge Mary Brainerd CEO of HealthPartners and Mary Wellik Director, Olmsted County Public Health as co-Chairs of the Advisory Committee and all the members for their commitment and contributions. Their work continues and will address key issues including continuing and expanding public funding to support e-Health priorities, enhancing patient privacy and security protections, and reporting recommendations at a statewide summit in June 2007.

In support of the Minnesota e-Health Initiative's activities and recommendations as described in this report, the Governor's Fiscal Year 2008-2010 Budget proposes funding for Interconnected Electronic Health Record Grants and for Disease Surveillance Modernization.

Please direct any questions about this report to Dr. Martin LaVenture at (651) 201-5950.

Sincerely,

Dianne Mandernach

Dianne M. Mandernach
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Accelerating e-Health in Minnesota

January 29, 2007

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As required by Minnesota Statutes, Section 3.197, this report cost approximately $7,500 to prepare, including staff time, printing and mailing expenses.

Upon request, this material will be made available in an alternative format such as large print, Braille, or cassette tape.

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"Comprehensive reform this year should move Minnesota toward an interoperable electronic health record system."

Governor Tim Pawlenty
State of the State Address
January 17, 2007

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Executive Summary

Minnesota investments in health information technology are helping to improve patient safety, increase the quality of health care, reduce costs, protect the confidentiality of health data, and strengthen and advance public health. However, challenges remain to achieving statewide adoption and use of interconnected electronic health records (EHR) and related health information technology (HIT).

This report highlights three areas for urgent action: public funding to support e-Health priorities, enhancing patient privacy and security protections, and updating and interconnecting public health information systems. These priority action areas were derived through the research and deliberations of the statewide MN e-Health Advisory Committee, whose members represent consumers, providers, payers, purchasers, state and local public health, and academic institutions.

Continue and Expand Public Funding to Support e-Health Priorities

Adoption of EHRs is growing in Minnesota, particularly in larger hospitals and primary care clinics. An estimated 57% of Minnesota's larger clinics have EHRs fully or partially implemented, compared to 25% for smaller clinics. Yet, large gaps exist in EHR use between urban providers and those in rural and underserved urban communities. Long term care, local public health, and other settings also lag behind compared to clinics and hospitals. Smaller organizations must overcome the lack of capital resources and other implementation challenges to make the transition to EHRs.

Interconnecting clinicians to securely share patient healthcare information across organizations is important to achieve the full promise of e-Health. At least six initiatives in communities across the state are emerging as test beds for health information exchange. These projects are addressing challenges such as establishing collaborative governance structures, setting common standards and policies for ensuring privacy protections, and creating common practices for client and provider access, authentication, authorization and auditing. These organizations need public resources in order to advance implementation statewide.

To promote EHRs as well as health information exchange, the 2006 Minnesota Legislature appropriated $1.5 million to provide e-Health grants to community collaboratives in rural and underserved areas. Seven planning and five implementation grants were awarded for calendar year 2007. More than double the requests for funding were received than the program was ultimately able to support, demonstrating the need for greater public support in this area. Governor Pawlenty's 2008 Budget proposes $18 million to support investments in health information technology (HIT) through 2010.

Enhance Patient Privacy and Security Protections

Minnesotans have a strong interest in maintaining and protecting the privacy of their health information. Through the Minnesota Privacy and Security Project, the e-Health Advisory Committee conducted a systematic review of current laws and practices to identify the most significant privacy and security concerns facing organizations in implementing the electronic exchange of health information. The project revealed two overarching privacy and security issues that impede on the electronic exchange of health information, impacting all types of health care organizations, and applying to all types of health information:

- The implementation of Minnesota's patient consent requirements within the context of electronic health information exchange.
- Operational difficulties in first providing, and then limiting and monitoring, external organizations' electronic access to patient data.

These issues and options to deal with them are addressed in detail in two MPSP Reports on privacy and security related to concepts of electronic exchange of health information. See www.health.state.mn.us/ehealth/mpsp .

Update, Improve and Inter-Connect Public Health Information Systems in Minnesota

The health of our communities depends on effective use of health information. For public health, the use of such information focuses on populations and prevention rather than on treating existing conditions among individuals. Unfortunately, a widening technology gap exists between private health care and public health agencies. This is critical because the vast majority of data used by public health departments to detect community threats comes from private laboratories and hospitals, and the public expects timely detection and response to such health threats. The Minnesota Public Health Information Network (MN-PHIN) was established by the Minnesota legislature in 2005 as a state-local initiative dedicated to ensuring that health departments have the information systems, policies and technical expertise necessary to meet their mission, not only in the face of growing public health threats but as a critical partner in the Minnesota e-Health Initiative.

Progress on Priority Issues in 2006

The Minnesota Department of Health and the committees and workgroups of the Minnesota e-Health Initiative achieved significant progress on priority issues in 2006 with support from the Governor, the Legislature, a federal contract, and a private grant. However, more work remains to be done. The table below summarizes the accomplishments as well as potential solutions that are recommended to further accelerate the adoption of health information technology in Minnesota.

Priority Issue	Progress and Potential Solutions for Remaining Gaps
I. Continue and Expand Public Funding to Support e-Health Priorities	**Progress made with $1.5M Appropriation:** ▪ Awarded 12 grants to support interoperable health information technology in rural and underserved areas. **Potential Solutions for Remaining Gaps:** ▪ Continue and expand funding for rural and underserved areas. ▪ Provide technical assistance for procuring, implementing and maximizing use of electronic health records and other technologies. ▪ Support community projects in secure electronic exchange of clinical information.
II. Enhance Patient Privacy and Security Protections while facilitating health information exchange	**Progress made with Health Information Security and Privacy Collaboration:** ▪ Conducted a systematic and comprehensive review of privacy laws and practices. **Potential Solution for Remaining Gaps:** ▪ Modify patient consent requirements in Minnesota Statutes, section 144.335 to maintain privacy protections while better facilitating electronic exchange of patient information.
III. Update, Improve and Inter-Connect Public Health Information Systems	**Progress made with Robert Wood Johnson InformationLinks Grant:** ▪ Established a joint state-local governance structure to set priorities and coordinate action. ▪ Identified policy and technical changes needed to improve and inter-connect information systems. **Potential Solutions for Remaining Gaps:** ▪ Modernize local and state public health information systems to meet emerging data standards. ▪ Establish standardized electronic connections with private clinics, hospitals, and laboratories.

Recommendations to the Legislature for Action

Based on the findings and recommendations of the Minnesota e-Health Advisory Committee, the Commissioner of Health makes the following recommendations to the 2007 Minnesota Legislature:

Continue and Expand Public Funding to Support e-Health Priorities:
Continue and expand the e-Health matching grant program in Minnesota Statutes, section 144.3345, through 2010 to support:

- Interoperable Electronic Health Record Adoption in rural and underserved areas, so that small primary care clinics, rural hospitals, local health departments, community clinics and long term care facilities can acquire health information technology to improve the quality and safety of care and to securely exchange health information.
- Health Information Exchange through community and regional health information exchange collaboratives that will improve the continuity and quality of care, and will reduce costs and patient discomfort through fewer duplicate tests.
- Technical Assistance and Evaluation to ensure:
    - Grantees are adhering to proven planning models and selecting electronic health records that meet interoperability standards.
    - Community and regional Health Information Exchanges are adhering to technical, privacy and security standards.
    - Rural providers and local health departments not receiving grants receive similar technical assistance.
    - Statewide efforts to adopt national health data standards and to develop detailed implementation guides are adequately supported and staffed.
    - Progress toward e-Health goals, especially in rural and underserved areas, is being assessed and reported.

Enhance Patient Privacy & Security Protections:

- Modify patient consent requirements in Minnesota Statutes, section 144.335, as described in the Minnesota Privacy and Security Project Reports to preserve patient consent while clarifying patient consent requirements for the electronic exchange of patients' health information.

Update, Improve and Inter-Connect Public Health Information Systems:

- Update local and state public health information systems to adhere to emerging data standards.
- Update and inter-connect MDH disease surveillance systems.
- Establish standardized data exchange capabilities with private clinics, hospitals, and laboratories.
- Create greater interoperability among public health information systems to improve client services and population health assessment, and to integrate currently redundant software functions across systems.

The Governor's Budget Proposals

In support of the activities and recommendations of the Minnesota e-Health Initiative, the Governor has proposed funding for Interconnected Electronic Health Record Grants and for Disease Surveillance Modernization. The proposal is for a Health Care Access Fund appropriation of $7.50 million in FY 2008 and $11.00 million in FY 2009 and 2010 for investments in health information technology to improve safety, interconnect clinicians and communities, and strengthen and improve public health in Minnesota. The Governor's proposal:

- Continues and enhances the matching grant program to rural health care providers and underserved areas of Minnesota for adoption of interoperable electronic health records and personal health records.
- Supports implementation of the Minnesota Public Health Information Network project to update local health department systems.
- Supports technical assistance to grantees and local public health departments.

In further support of the recommendations found in this report, the Governor also proposes a Health Care Access Fund appropriation of $2 million per year to develop and implement an integrated statewide surveillance system that will comply with emerging national standards and requirements. The new system will improve the detection and response to bio-terrorism events, disease outbreaks such as pandemic flu, and trends in chronic diseases such as cancer and diabetes. The Governor's proposal complements his e-Health proposal by enabling the Minnesota Department of Health (MDH) to exchange data securely and electronically with partners who are investing in electronic health information technology.

Section I: Background

Introduction

The U.S. health and health care sectors are undergoing what is arguable the largest and most widespread transformation in history. At a rapid pace that is in itself historic, health information technologies are being adopted as a way to improve patient safety, increase the quality of care, reduce costs, and strengthen and advance public health. Health organizations are steadily unburdening 21st Century medicine from paperwork that has remained largely unchanged since the 19th Century and using the power of knowledge and technology to help improve the health of consumers and communities.

e-Health is transforming healthcare, not just reforming it. Using the power of information to get results, health information technology has proven to help:

- Patients get the right care at the right time.
- Empower consumers to more actively and knowledgeably engage in their health care.
- Reduce medical errors.
- Create healthier communities.
- Provide reports needed for quality improvement.
- Make a faster and more effective public health response to health threats.
- Reduce costs in the process.

Minnesota hospitals, clinics, health systems, and communities can demonstrate these benefits today, thanks to public and private investments in health information technology (HIT). Yet, significant challenges remain:

- Healthcare providers in rural and underserved communities require financial and technical assistance to plan, purchase, and implement electronic health records (EHRs) effectively. Without this help, there is a risk of creating a two-tiered of technological have and have-nots that will leave many Minnesotans without the benefits of e-Health.
- Workable solutions must be found to further improve the privacy and confidentiality of patient data and reduce the liability concerns of healthcare organizations. Without these solutions, patients and health care providers will be less willing to engage in the electronic exchange of health information.
- A widening technology gap must be bridged between private health care and health departments. This is critical because the vast majority of data used by public health to detect community threats comes from private laboratories, clinics, and hospitals. The public expects and deserves timely detection and response to health threats.

"I often found myself doing school physicals on children without the chart as they had had their eye appointment earlier that day at another clinic and the [paper] chart had not had a chance to come back through our reroute system…"

"We have found that the use of an electronic health records does improve quality."

Dr. Deb Weimerskirch, MD, "Implementing an EMR…Changing Care and Culture." Presented at the Minnesota e-Health Summit, June 2006.

"During a recent visit to a Moose Lake Clinic… a physician stated that she couldn't imagine going back to writing [paper records]…after transitioning into EHRs…the physician stated that by having EHRs as a tool in their clinic this had improved the quality of care to patients."

Dianne Mandernach, Minnesota Commissioner of Health, "Opening Remarks." 2006 Minnesota e-Health Summit

Focused and coordinated action now can effectively address these barriers and accelerate health information technology adoption, so all Minnesotans will benefit. This report describes the major components of e-Health, highlights the current status of health information challenges facing Minnesota today, as well as the opportunities that the current environment presents for addressing these challenges.

Important Components of e-Health

Electronic Health Records

Electronic Health Records (EHRs) are the foundational building blocks for achieving the promise of e-Health. An EHR is an electronic patient health record that includes powerful tools to bring evidence-based decision support into the hands of clinicians.[1]

Electronic health records can:

- Prompt clinicians for tests that are due, and provide alerts to avoid medication and other types of errors, which are often due to illegible handwriting.
- Automate and streamline a clinician's workflow, ensuring that all clinical information is communicated.
- Prevent delays in response that result in gaps in care.
- Support the collection of data for uses other than clinical care, such as billing, quality management, outcome reporting, and public health disease surveillance and reporting.
- Provide appropriate data for screening and/or prevention activities, to increase the ability of clinics and physicians to improve the health of groups of their patient population with the same conditions (e.g., chronic disease management).
- Secure exchange of medical data with other facilities seeing the same patient, so that continuity of quality care is ensured and tests do not have to be repeated.

Personal Health Records (PHRs)

A Personal Health Record (PHR) is an electronic application through which individuals can maintain and manage their health information (and that of others for whom they are authorized) in a private, secure, and confidential environment.[2] Many PHRs also provide access to reputable prevention and self-care information.

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[1] Brailer, D. "The Decade of Health Information Technology: Delivering Consumer-centric and Information-rich Health Care," *Framework for Strategic Action*. Washington, D.C.: Department of Health & Human Services: National Coordinator for Health Information Technology, 2004.

[2] Brailer, D. "The Decade of Health Information Technology: Delivering Consumer-centric and Information-rich Health Care," *Framework for Strategic Action*. Washington, D.C.: Department of Health & Human Services: National Coordinator for Health Information Technology, 2004.

Personal health records allow consumers to access their own data when and where it is needed in order to: [3]

- Securely manage the medications, conditions, immunizations, allergies, test results and other personal information for themselves and their family—information that is important for their physicians to know.
- Use their consolidated and longitudinal health histories to monitor and manage their health, especially for persons with chronic illness or disabilities.
- Have reliable care in emergency situations.
- Coordinate information about themselves among their families, institutions and providers that can help them to live in a more independent and healthy manner.

On-demand access to complete health information helps individuals manage their health and healthcare, and gives them the knowledge they need to advocate for themselves in care settings. According to the Markle Foundation, "Consumers view personal health records as an important element in reducing medical errors and increasing quality of care."[4] Consumers also have a strong interest in utilizing health information technology to more fully participate in their own health care (Table 1).[5] [6]

Table 1: Interests Among Consumers in Using Health Information Technology*

Statement	%Yes
Check for mistakes in your medical records.	69%
Check and fill prescriptions.	68%
Get results over the Internet.	58%
Conduct secure and private email communication with your doctor or doctors.	57%
Track symptoms or changes in their health online.	90%
Track their child's health (e.g., immunizations)	83%

**Source: Markle Foundation: December 2006 -accessed 1/15/07 at www.cgu.edu/include/lansky.pdf*

Health Information Exchange (HIE)

Health information exchange (HIE) is the secure movement of standardized healthcare information electronically across organizations within a region or community that are caring for the same individual. The goal of HIE is to:

[3] Lansky, D. P. D. "A National Agenda for Personal Health Records?" *2006 Connecting Americans to their Health Care: EmpoweredConsumers, Personal Health Records and Emerging Technologies*. Washington, D.C. : Markle Foundation, 2006.
[4] Knight, B. W. "Americans See Access to Their Medical Information as a Way to Improve Quality, Reduce Health Care Costs," *Embargoed for Release: Dec. 7, 2006 - 12:01 a.m. (ET)*. Washington D.C.: Markle Foundation 2006.
[5] Lansky, D. P. D "A National Agenda for Personal Health Records?" *2006 Connecting Americans to their Health Care: EmpoweredConsumers, Personal Health Records and Emerging Technologies*. Wash., D.C. Markle Foundation, 2006.
[6] Knight, B. W. "Americans See Access to Their Medical Information as a Way to Improve Quality, Reduce Health Care Costs," *Embargoed for Release: Dec. 7, 2006 - 12:01 a.m. (ET)*. Washington D.C.: Markle Foundation 2006.

- Facilitate authorized access to and retrieval of a person's relevant clinical data or information between disparate health information systems while maintaining the meaning of the information being exchanged.[7]
- Provide safer, more timely, efficient, effective, equitable, confidential and patient-centered care.[8]

Formal organizations are now emerging to provide both form and function for health information exchange efforts. These organizations (variously called Regional Health Information Organizations (RHIOs) or Sub-Net Organizations (SNOs)) are generally geographically-defined entities which develop and manage contractual relationships among their member organizations, arrange for the means of secure electronic exchange of information, and implement and maintain HIE standards.

Population Health

e-Health must be about more than technology, quality and costs—it must also encompass improvements in the health of populations and in health status indicators, and contribute to reducing disparities in health status between populations. Population health will be improved in Minnesota by using the timely exchange and effective use of data and information to:

- Detect and respond to community threats and public health emergencies.
- Assess the health trends and risks in the community.
- Monitor health disparities and focus interventions on underlying causes.
- Inform public health policy.
- Provide the basis for knowledge back to clinicians to inform practice and to consumers to help inform decision making.

Benefits of e-Health to Consumers and Communities

In addition to the advantages of safer, higher quality care and lower costs, e-Health benefits consumers by positively impacting their interactions with the health system. The Minnesota e-Health Advisory Committee examined the four overall e-Health goals in terms of their benefits to consumers. Examples of these benefits are listed below.

Informing Practice: Benefits of Electronic Health Records

- Consumers save time and worry because there is no need to fill out lengthy forms or explain their health history (and possibly forget something important) every time they see a healthcare provider.
- Healthcare is safer because healthcare providers will have the right information to help make better decisions.

[7] eHealth Initiative. "Second Annual Survey of State, Regional and Community-based Health Information Exchange Initiatives and Organizations," 2005.

[8] eHealth Initiative "Second Annual Survey of State, Regional and Community-based Health Information Exchange Initiatives and Organizations," 2005.

- Patient information will be accessible so consumers won't need to bring their medical records with them to doctor appointments to ensure that they receive appropriate, high quality care.

Interconnecting Clinicians & Health Information Exchange: Benefits of Providing Timely & Accurate Health Information

- A patient's healthcare provider will have person's relevant health information available without the time delay and risk of transporting paper records.
- Direct and timely access to the patient's information will improve communication and coordination of care among caregivers.

Personalizing Care: Benefits of Personal Health Records

- Consumers have convenient and secure access to their own health information.
- Consumers have access to health information, whenever they need it, to help their children or an elderly parent who rely on them for health decisions.
- Consumers can record their health history and set reminders to help monitor and take responsibility for their healthcare.

Ensuring Healthy Communities: Benefits of a Strong Statewide Public Health System

- Citizens will have greater confidence that, because public health agencies and healthcare providers are connected electronically, they can communicate more easily and respond quicker in the event of a health emergency.
- Citizens are better informed about public health issues in their community, neighbors are healthier because diseases and other risks are prevented, healthy behaviors are supported, and environmental health hazards are reduced.
- Citizens are supported in taking responsibility for their own health by the prevention and wellness resources that are available electronically.

National e-Health Developments: Where does Minnesota stand?

Public Funding for e-Health Initiatives

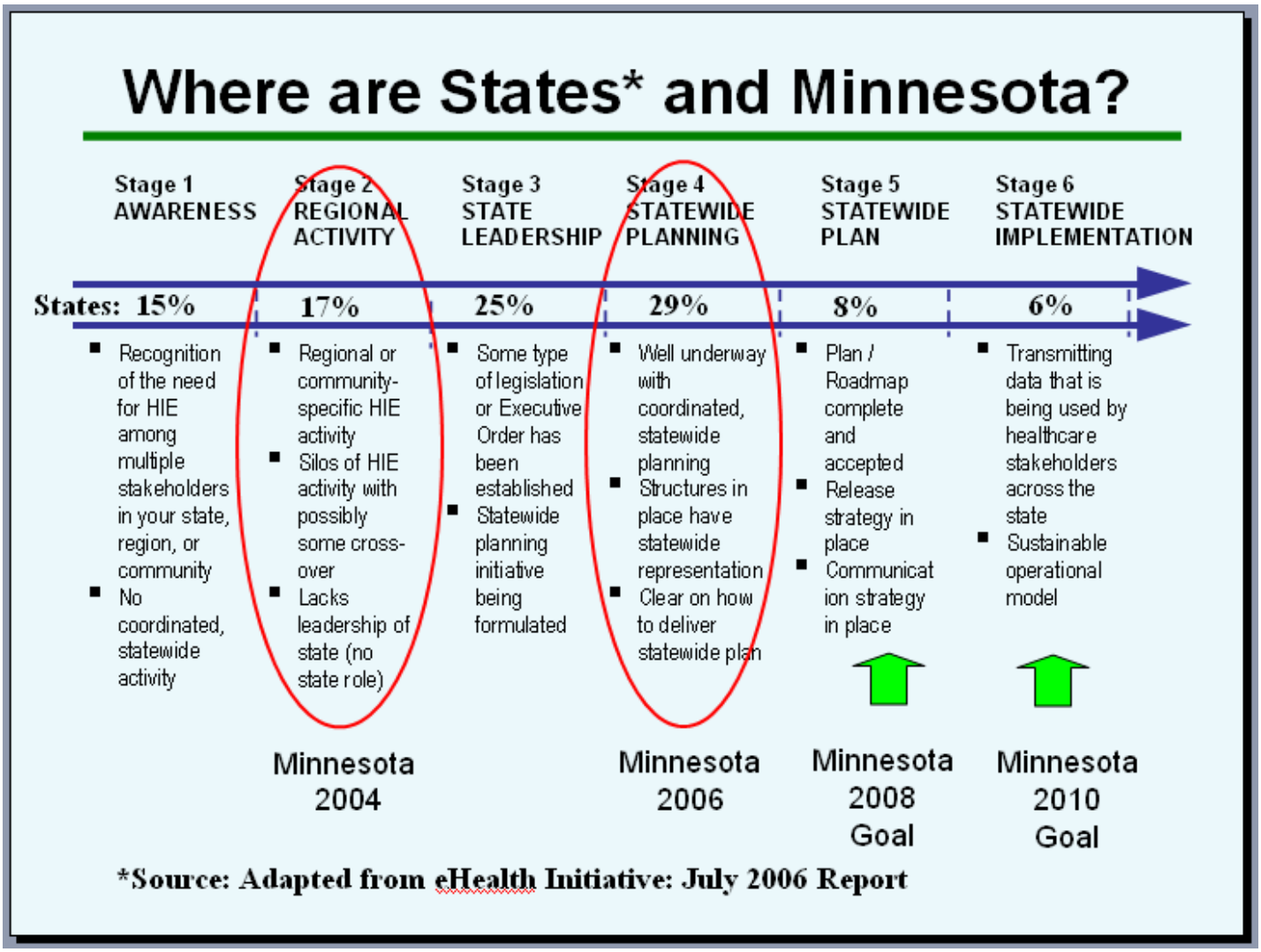
Many states are finding that, in order to advance widespread and uniform adoption of health information technology, an investment of public funding is necessary. This is particularly true for ensuring that small, rural and inner city primary care clinics can afford to adopt interoperable electronic health records.

Statewide Health Information Exchange Activities: A Comparison

Many states are also investing in comprehensive, integrated approaches to statewide health information exchange. Figure 1 compares Minnesota to other regions and states in terms of capacity for statewide health information exchange (HIE). Among the state HIE initiatives identified in a 2006 survey from the national eHealth Initiative, 29% of these projects are at the implementation stage (Stage 4), and 14% are at an operational stage (Stage 5 or 6).[9] Minnesota overall is approximately at Stage 4 with the coordination and planning of statewide health information exchange.

[9] Bordenick, J. M., J. & Welebob, E. "Third Annual Survey of Health Information Exchange Activities at the State, Regional, and Local Levels." Washington, D.C.: eHealth Initiative, 2006.

Figure 1: Health Information Exchange Activities at the State, Regional, & Local Levels[10]



Selected National e-Health Activities: Implications for Minnesota

e-Health activity is influenced by many national e-health initiatives underway. The Advisory Committee, MDH and a number of other experts in Minnesota are connected to and involved with national initiatives. These initiatives inform the goal of developing a fully interoperable health information technology infrastructure in Minnesota. Selected national activity and the implications are shown in Table 2.

[10] Bordenick, J. M., J. & Welebob, E. "Third Annual Survey of Health Information Exchange Activities at the State, Regional, and Local Levels." Washington, D.C.: eHealth Initiative, 2006.

Table 2: Selected National e-Health Activities: Implications for Minnesota	
Activity	**Implications for Minnesota**
National health data standards ***Healthcare Information Technology Standards Panel (HITSP)*** **http://www.hhs.gov/healthit/standards/**	Data standards will have to be adopted by all healthcare providers and local health departments. The standards will include how information is coded, stored, and exchanged.
Certification of EHRs ***Certification Commission for Healthcare Information Technology (CCHIT)*** **http://www.cchit.org/**	Healthcare providers procuring EHRs will know which products meet national specifications for various minimum functions. The list of minimum functions will grow over time.
Privacy and security ***Health Information Security and Privacy Collaboration (HISPC)*** **http://healthit.ahrq.gov/privacyandsecurity**	The analysis of 34 states on critical privacy and security issues, laws, and practices that impact the electronic exchange of health information. The Minnesota Privacy and Security Project is part of this effort.
National standards for public health ***Public Health Information Network (PHIN)*** **www.cdc.gov/phin**	State and local public health information systems will need to adopt the data and functionality standards set by the Centers for Disease Control & Prevention.
National policy guidance on critical e-Health issues ***American Health Information Community (AHIC)*** **http://www.hhs.gov/healthit/**	Policies and recommendations from this national expert panel and its work groups will influence and guide Minnesota policy on issues such as consumer empowerment, chronic disease, bio-surveillance, quality and personal health records.
Tested models for regional health information exchange ***Nationwide Health Information Network (NHIN)*** **http://www.hhs.gov/healthit/nhin.html**	Four national pilot projects could yield important lessons and recommendations for establishing regional health information exchanges in Minnesota.
Health Exchange Policy Guidance, Best Practices and Advocacy ***eHealth Initiative (eHI)*** **www.ehealthinitiative.org**	Sample materials and frameworks can reduce risks in establishing regional health information exchanges.

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Section II: Minnesota e-Health Progress

Legislative History

Since 2004, the Minnesota Legislature has become increasingly engaged in the Minnesota e-Health Initiative. Legislative actions related to the Minnesota e-Health initiative have aimed to:

- Identify critical issues to advance EHR adoption.
- Encourage efforts to develop a consensus on implementing health information technology standards, necessary resources, data exchange, and privacy and security requirements.
- Support priority areas of need related to interoperable health information technology.

Minnesota e-Health Advisory Committee

In 2005, the Governor and the Minnesota Legislature made e-Health a priority by establishing the Health Information Technology and Infrastructure Advisory Committee (subsequently known as the Minnesota e-Health Advisory Committee) in Minnesota Statutes, section 62J.495. The Minnesota e-Health Advisory Committee currently consists of 26 members who represent key stakeholders, including health care providers, payers, public health professionals, and consumers. (See Attachment A for the Minnesota e-Health Vision, Focus Areas, Strategic Goals and Committee Charge in *Emerging Themes and Preliminary Recommendations for Action*, and Attachment B for the 2007-2008 Minnesota e-Health Advisory Committee membership list).

Figure 2 summarizes MN e-Health's milestones and achievements to date.

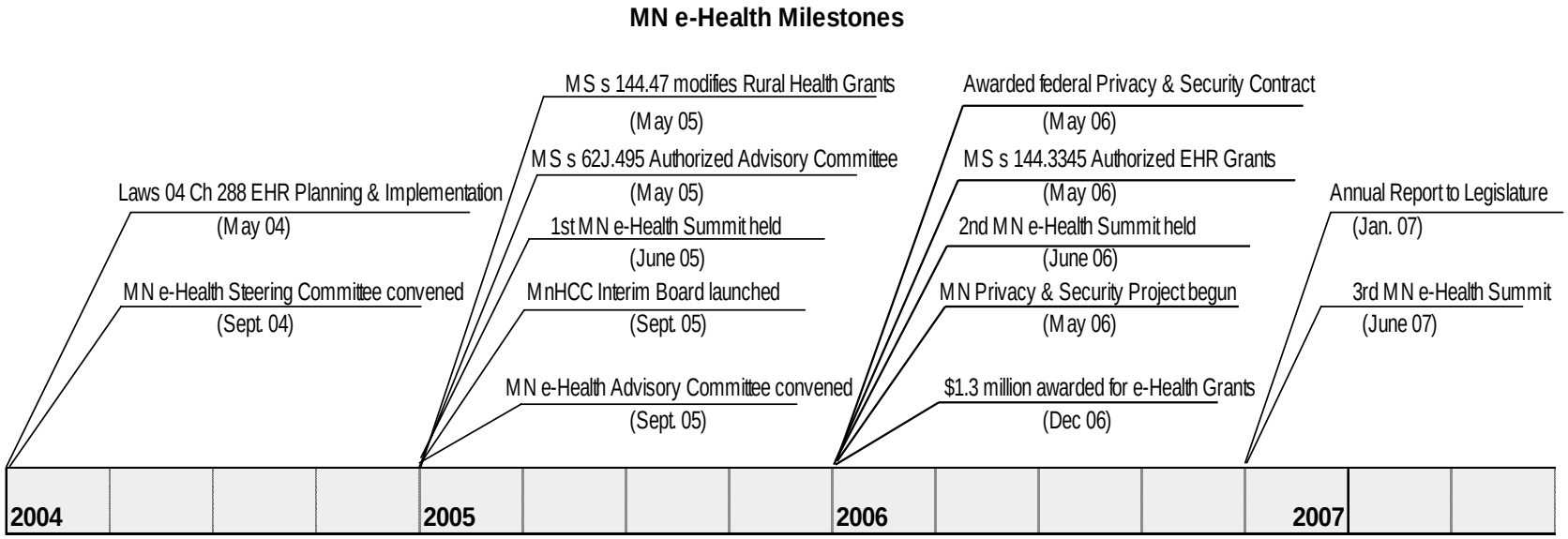
Progress on key e-Health activity in Minnesota is described on the following pages including: Grants Awarded for Interoperable Electronic Health Records, Progress on Electronic Health Record Access in Minnesota Hospitals & Clinics, Progress on Electronic Health Record Use in Local Health Departments, Progress on Networked Personal Health Records in Minnesota, Progress on Health Information Exchange in Minnesota, and Progress on Population Health - The Public Health Information Network.

The next Advisory Committee report for Strategic Action in Minnesota will be presented at the Minnesota e-Health Summit on June 28, 2007.

"The Advisory Committee is focused on the benefits to the consumer and on both the short and long term opportunities to accelerate the adoption of health information technology statewide."

Mary Brainerd, MBA, President and Chief Executive Officer, HealthPartners, Minnesota e-Health Co-Chair "Minnesota e-Health Progress to Date."

Figure 2: Minnesota e-Health Milestones & Achievements to Date: 2004 to Present



MN e-Health Achievements

Developed e-Health vision & roadmap w/ 4 strategic goals
Created principles for governance, finance, technology & standards for HIE
Assessed use of health information technology
Identified priorities for a public-private statewide HIE org.
Collaborated on Request for Information on NHIN
Identified cross-cutting issues: Privacy & Security, Funding, Technology, & Governance
Assessed scope of LPHDs Public Health Systems

MN e-Health Achievements

Issued 2005 Minnesota E-Health Report to Legislature
Assessed & developed recommendations for statewide HIT
Provided input and oversight of the creation of MN-PHIN
Created and reviewed meta-analysis of surveys
Recommended an Interim Board for HIE org.
Funded MnHCC ~ $120,000 to advance standards and policy on interoperability
Expanded eligibility for rural health HIT grants
Awarded $246,000 for 3 Rural Health HIT Grants
Secured Robert Wood Johnson Foundation InfoLinks Grant
Assessed LPHDs informatics needs & challenges

MN e-Health Achievements

Issued 2006 Minnesota E-Health Progress Report to Legislature
Funded & published a meta-analysis update report of assessment activity
Secured federal funding and completed Privacy and Security analysis
Served as Steering Committee to the Minnesota Privacy & Security Project (MPSP)
Added detail to roadmap, with 4 focus areas 17 recommendations–Adding a consumer emphasis
Published Emerging Themes & Preliminary Recommendations for Action: June 29, 2006
Published 1st directory of Minnesota HIT Projects
Expanded E-Health website to over 650 resource links
Provided input and advised new statewide exchange organization, known as MnHCC
Awarded $173,000 for 7 Rural Health HIT Grants
Awarded $1.3 million for 12 Interconnected EHR Grants
Developed Public Health Informatics Capacity Assessment Tool
Secured Robert Wood Johnson Foundation Common Ground Grant Funding
Reviewed lessons learned from about ~25 community projects statewide
Published MPSP Privacy & Security Barriers Report

Grants Awarded for Interoperable Electronic Health Records

Using funds proposed by the Governor and subsequently appropriated by the 2006 Legislature, MDH awarded 12 Minnesota e-Health Grants in early December 2006:

- Seven planning grants of up to $50,000 each to support a systematic and collaborative approach to identifying community needs and alternate solutions; and
- Five implementation grants of up to $250,000 each to support community-based projects in deploying HIT.

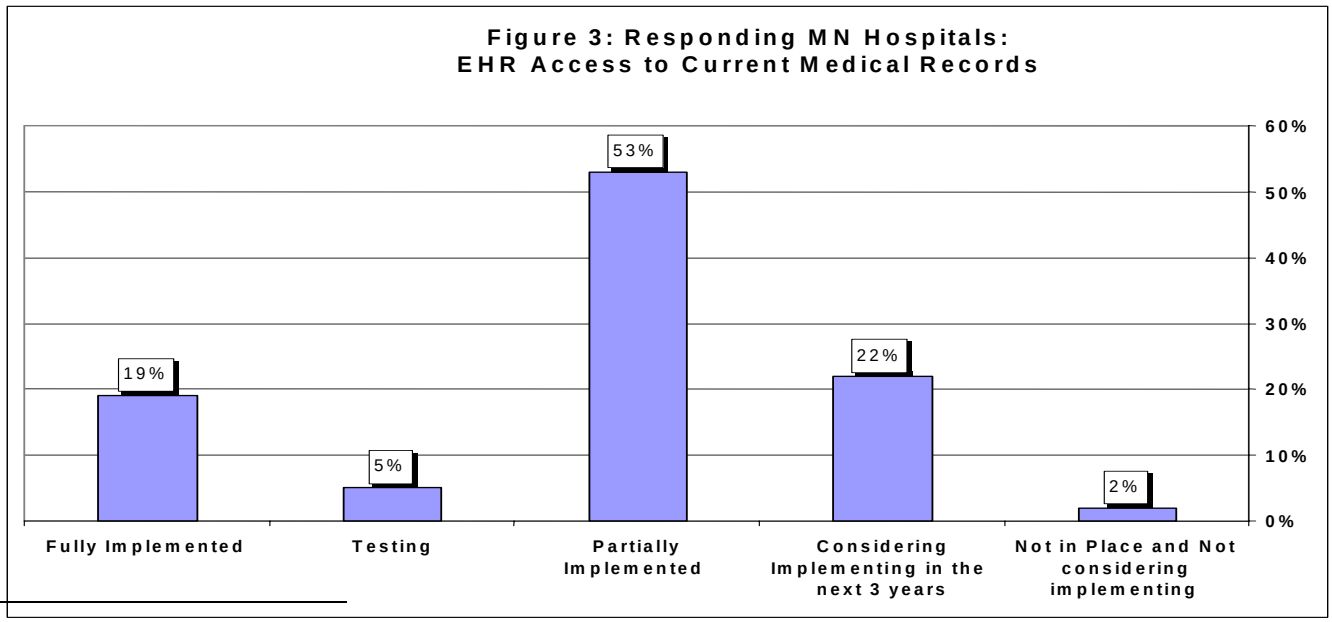
Representing a range of projects from across the state, these awards build upon the work of the Advisory Committee by highlighting and identifying the important need to advance HIT and connectivity in rural and underserved areas of the state. See Attachment E for a complete Summary of the 2006-2007 Minnesota e-Health Grant Projects.

The grant proposals showed that:

- Greater Minnesota is ready and anxious to be part of e-Health.
- Rural hospitals and providers are very willing to collaborate on HIT and HIE issues as they recognize it is important for their survival.
- Projects would benefit from technical support for systematic, thorough planning and help in choosing and implementing an EHR and other applications.
- The need is great: MDH received more than double the requests for funding than the program was ultimately able to support.

Progress on Electronic Health Record Access in Minnesota Hospitals & Clinics

According to a recent survey, 77% of responding Minnesota hospitals have either fully implemented or are in the process of implementing electronic health records (Figure 3).[11] Similarly, an estimated 57% of Minnesota's larger clinics have electronic health records fully or partially implemented. However, it is estimated that only 25% of smaller clinics have implemented electronic health records and other settings, such as long term care, have adoption rates below 10%.



[11] 2005 American Hospital Association (AHA): Survey of Hospital HIT Adoption. Retrieved March 2006, from http://www.aha.org/aha/issues/HIT/hitsurvey.html.

Progress on Electronic Health Record Use in Local Health Departments

A total of 76 out of 91 Local Health Departments (LHD) (cities and counties) in Minnesota responded to a survey in the fall of 2004 to assess the use of electronic health information systems in their agencies. The responses indicated that 66% (51) of local health departments have only a partially implemented integrated electronic health record, and none of these applications are currently able to electronically exchange data with healthcare providers in their community. One particular challenge is that local health departments are required to use approximately 17 separate and unique state and federal software applications that do not interconnect with other data systems. This lack of interoperability increases costs and jeopardizes the ability to deliver coordinated services to consumers.

Progress on Networked Personal Health Records in Minnesota

Several major health care systems in Minnesota offer personal health records to their patients, among them HealthPartners, Allina Hospitals and Clinics, Fairview Health Services, Park Nicollet Health Services, and Children's Hospitals and Clinics. In addition, corporations are increasingly offering PHRs to their employees, including the Carlson Companies and Blue Cross Blue Shield. Currently none of these PHRs are networked or portable, so an individual's health information cannot be loaded into their clinic's EHR or taken with them with a change of employment. However, one of the 2006-2007 MN e-Health grant projects (see Attachment E) is a collaboration between Willmar area hospitals and clinics, the University of Minnesota and Stratis Health to pilot the networking of PHRs among patients with advanced chronic disease as a way to network and exchange information among various care providers.

Progress on Health Information Exchange in Minnesota

In Minnesota, several key initiatives are emerging as test beds for health information exchange of clinical information.[12] These projects are addressing the issues of establishing collaborative governance structures with a diverse and broad set of community stakeholders, creating common standards and policies for information sharing, identifying sustainable funding models and business plans, and identifying metrics for performance measurement. The projects include:

- The Minnesota Health Care Connection (MnHCC), a private-public, not-for-profit collaborative focused on providing statewide coordination and policy development for health information exchange and to support community-based health information exchange initiatives in Minnesota. (http://www.mnhcc.org/) The MN-HCC is a Minnesota e-Health grantee.
- The Community Health Information Collaborative (CHIC), a non-profit, member-run, health care information collaborative in northeastern Minnesota that supports most of the hospitals and clinics in its 18 county service area. (http://www.medinfosystems.org) CHIC is a Minnesota e-Health grantee.
- The Winona Health Community Record Data Exchange, is a system which connects health care providers in the Winona County area with their patients through a single electronic system that allows them to share patient information in a secure setting.
- The Minnesota HIPAA Collaborative's Rx/Medication History Project, is a collaborative of projects that is focusing initially on making medication history available in hospital emergency departments and other urgent care settings. (http://www.mnhipaacollab.org/)

[12] Minnesota e-Health Initiative, (2006, May 2006). Profiles of Key e-Health Related Projects in Minnesota. www.health.state.mn.us/e-health/profiles.pdf.

- The Community-Shared Clinical Abstract to Improve Care, a collaborative project between Allina, Fairview, HealthPartners, and the University of Minnesota, that is implementing and evaluating two approaches for exchanging critical health information in Emergency Departments in the metro area. (http://www.gold.ahrq.gov/GrantDetails.cfm?GrantNumber=UC1%20HS16155)

Progress on Population Health—The Public Health Information Network

The Minnesota Public Health Information Network (MN-PHIN) was initiated by the 2004 Minnesota Legislature to improve and protect the health of Minnesotans through the strategic application and management of health information systems. The MN-PHIN initiative seeks to ensure that state and local health departments have the information systems, policies and technical expertise necessary to meet their mission, not only in the face of growing public health threats but as a critical partner in the Minnesota e-Health Initiative. Public health is one of the four domains included in both the Minnesota and national e-Health initiatives.

The state-local Steering Committee for MN-PHIN has identified three overall strategies:

Interconnect. Ensure public health departments can electronically and securely exchange health information among themselves and with the private health care sector by adopting the newly released national data standards.

Integrate. Create more uniformity across public health information systems by defining the fundamental work of public health in ways that ensure new and existing information systems effectively support that work.

Inform. Use health information in more effective, efficient and integrated ways to improve services for the individuals, families and communities served by public health.

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Section III: Minnesota e-Health Priorities, Gaps, & Solutions

The Governor's budget proposal supports investment in the three priority issues as shown in Table 4. Investment in these priority issues will help achieve the following outcomes:

- Improve patient safety, increase quality of care, reduce costs, and strengthen and advance public health.
- Protect the privacy and security of health information exchanges.
- Engage consumers and health care providers by improving the value of health care in Minnesota.

Over the last year, the committees and workgroups of the e-Health Initiative and MDH achieved significant progress on these priority issues with support from the Governor, Legislature, a federal contract, and a private grant. However, more work remains to be done. Table 3 below summarizes the accomplishments as well as potential solutions that are recommended to further accelerate adoption of health information technology in Minnesota.

Table 3: Summary of Priority Issues, Progress, Gaps and Potential Solutions

Priority Issue	Progress and Potential Solutions for Remaining Gaps
I. Continue and Expand Public Funding to Support e-Health Priorities	**Progress made with $1.5M Appropriation:** ▪ Awarded 12 grants to support interoperable health information technology in rural and underserved areas. **Potential Solutions for Remaining Gaps:** ▪ Continue and expand funding for rural and underserved areas. ▪ Provide technical assistance for procuring, implementing, and maximizing the use of electronic health records and other technologies. ▪ Support community projects in secure electronic exchange of clinical information.
I. Enhance Patient Privacy and Security Protections while facilitating health information exchange	**Progress made with Health Information Security and Privacy collaboration:** ▪ Conducted a systematic and comprehensive review of privacy laws and practices. **Potential Solution for Remaining Gaps:** ▪ Modify patient consent requirements in Minnesota Statutes, section 144.335, to maintain consent, but better facilitate providers' electronic exchange of patients' information.
III. Update, Improve and Inter-Connect Public Health Information Systems	**Progress made with Robert Wood Johnson InformationLinks Grant:** ▪ Established a joint state-local governance structure to coordinate action. ▪ Identified policy and technical changes needed to improve and interconnect information systems. **Potential Solutions for Remaining Gaps:** ▪ Update local and state public health information systems to meet emerging data standards. ▪ Establish standardized electronic connections with private clinics, hospitals, and laboratories.

Priority Issue I: Continue and Expand Public Funding to Support e-Health Priorities

The lack of capital resources and other implementation challenges remain significant barriers to electronic health record adoption in rural and underserved urban communities. Providing both public funding and technical assistance would enable these health care settings to minimize business risk and ensure effective use of interoperable EHRs and other forms of interconnected health information technology.

A comprehensive approach will require public funding in three areas:

Adoption of Interoperable Electronic Health Records
Neither the financial resources—nor even the financial incentives—currently exist for clinics in these areas of the state. *Because the EHR is the fundamental building block of e-Health and health information exchange, neither the providers nor their patients will have the benefit of e-Health without public funding to help with the initial investment.*

"We have clinics and providers in Minnesota that are struggling to see how EHRs can happen for financial reasons."

Dianne Mandernach, Minnesota Commissioner of Health, "Opening Remarks." 2006 Minnesota e-Health Summit

Regional and Statewide Health Information Exchanges
Minnesota, like most other states, is working to create the policy, legal and technical framework for securely, accurately, efficiently and confidentially exchanging health information for patient treatment. This is critical if we are to realize improvements in quality, safety and outcomes, while still protecting patient privacy.

Given the complexity of these issues, and the likely time frame over which these exchange organizations will be working, public funding will be needed as a component of their overall funding strategies. This is particularly true in the beginning, when participation in the exchange will have little, if any, financial benefit to member organizations.

"Even with intense preparation to select an EHR, when small clinics reach the point of making a decision, the basic fixed costs of an EHR system are simply too high, and we are leaving many small clinics behind."

Jennifer Lundblad, PhD, MBA, President and CEO, Stratis Health

Technical Assistance and Evaluation
Given the complexity of both of the areas above, and the need to have clear accountability for the public funds expended, resources must be dedicated to provide technical assistance to grantees and non-grantees alike, as well as to evaluate outcomes of the projects to ensure that:

- Grantees are adhering to proven planning models and selecting electronic health records that meet interoperability standards.
- Community and regional Health Information Exchanges are adhering to technical, privacy and security standards.
- Provide similar technical assistance to grantees, local health departments, and rural providers not receiving grants.
- Support statewide efforts to adopt national health data standards and to develop detailed implementation guides as needed.
- Progress toward e-Health goals, especially in rural and underserved areas, is being assessed and reported.

Priority Issue II: Enhance Patient Privacy & Security Protections

Minnesotans have a strong interest in maintaining and protecting the privacy of their health information as health records shift from a paper to electronic world. The Minnesota Privacy and Security Project engaged many experts and stakeholders to systematically review current laws and practices. They identified the most significant privacy and security concerns facing organizations in implementing electronic exchange of health information.

"Privacy and Security is a seminal part of how we are going to be able to move into health information exchange across systems in Minnesota."

Mary Wellik, BSN, MPH, Public Health Director, Olmsted County Public Health Services, Minnesota e-Health Co-Chair "Minnesota e-Health Progress to Date." 2006 Minnesota e-Health Summit

Key Findings

The project revealed two overarching privacy and security concerns that impede the electronic exchange of health information, impact all types of health care organizations, and apply to all types of health information:

1. The implementation of Minnesota's patient consent requirements within a health information exchange. This concern has two parts. First, there are significant and irreconcilable differences in organizations' interpretations of Minnesota's patient consent requirements. These differences make it impossible for health care providers to agree on "when" and "how" patient consent is required. Second, the patient consent requirements were designed for paper-based exchanges of information and early electronic data base systems that are not conducive to a real-time, automated electronic exchange of information.

2. Operational difficulties in first providing, and then limiting and monitoring external organizations' electronic access to patient data. This concern is identified as one general issue, although it is a set of interconnected security problems that must be addressed concurrently to successfully develop and implement a health information exchange. To give external health care providers appropriate access to electronic health records and patient data, organizations need to address four security topics, for which there are no fully adequate solutions:

- Mechanisms to establish and maintain a list of individuals authorized to access patient data.
- Methods to authenticate authorized individuals who access patient data.
- Information access controls – within information systems and through coordinated organizational policies – to limit authorized individuals' access to the patient data that is appropriate for the individual's functions and needs.
- Mechanisms for coordinated auditing across organizations to identify authorized individuals who inappropriately access health information.

Recommendations

The Minnesota Privacy and Security Project brought together a Solutions and Implementation Plans Work Group to develop solutions to eliminate or reduce

these two privacy and security barriers while preserving and strengthening patient privacy protections. Two Subgroups were formed to address the barriers:

The Patient Consent Subgroup examined differences between health care providers regarding "when" and "how" patient consent is required to exchange patients' health information. This Subgroup identified a number of potential solutions – including advantages and disadvantages for each solution – to address nine specific patient consent issues related to:

- Undefined terms and ambiguous concepts.
- Difficulties in determining the appropriate application of Minnesota's patient consent requirements to new concepts in the electronic exchange of health information.
- The need to update Minnesota's patient consent requirements to allow mechanisms that facilitate the electronic exchange of patients' information while respecting the patients' ability and wishes for controlling their information.

The Authorization, Authentication, Access Control and Auditing Subgroup (4A Subgroup) developed a set of 19 principles for authorizing and authenticating individuals, setting access controls, and auditing in a health information exchange. These principles provide Minnesota health care organizations a foundation and framework for guiding organizations' decision making in forming and implementing health information exchanges. The general principles form a "conceptual solution" that was developed to be:

- Independent of a particular health information exchange architecture.
- Flexible enough to adapt to changes in information technology.
- Consistent with national standards currently under development.
- Capable of being refined and more finely detailed as health care organizations gain experience in implementing the electronic exchange of health information.

The Minnesota Legislature should consider enacting modifications to Minnesota Statutes, section 144.335, that resolve differences between health care providers regarding "when" and "how" patient consent is required to exchange patients' health information. The modifications should address patient consent issues by:

- Defining undefined terms and ambiguous concepts in Minnesota's patient consent requirements.
- Adding language to clarify the application of Minnesota's patient consent requirements to new concepts in the electronic exchange of health information.
- Updating Minnesota's patient consent requirements to allow mechanisms that facilitate the electronic exchange of patients' information while respecting the patients' ability and wishes for controlling their information.

Minnesota health care organizations should continue to refine and develop the 19 principles for authorizing and authenticating individuals, setting access controls, and auditing in a health information exchange as the organizations expand their efforts to electronically exchange health information.

For more information on the Minnesota Privacy and Security Project, see:
http://www.health.state.mn.us/e-health/mpsp/index.html

Priortiy Issue III: Update, Improve and Inter-Connect Public Health Information Systems

Improvements in population and public health require a strong collaborative partnership with healthcare providers and others for the two-way exchange of timely and accurate information that enables assessment of both community health and community threats.

Recent events have underscored the urgent need for public health, healthcare, policy makers and the public to have comprehensive, timely and accurate information. Terroristic acts, growing incidents of food contamination, and the looming threat of pandemic influenza have turned the spotlight on the limitations of current information system architecture within public health, especially its limited ability to rapidly exchange data with others. The need for prompt access to critical information – lab results, disease reports, birth and death records, disease surveillance data, preparedness data and knowledge sources – has never been greater.

Public health information systems must be updated, improved, and interconnected to ensure rapid and reliable technology to gather information, send it where it is needed, store it securely, and use it effectively to control outbreaks and respond to community fears.

"MN-PHIN will improve and protect the community's health by modernizing how public health agencies collect, exchange and act on information."

Karen Zeleznak, MS, MPH, Public Health Administrator, Bloomington Division of Public Health, MN-PHIN Steering Committee Co-Chair

Minnesota Public Health Information Network (MN-PHIN)
Given the widening technology gap that exists between private health care and public health agencies, the Minnesota Public Health Information Network (MN-PHIN) was created to ensure that state and local health departments have the information systems, policies and technical expertise necessary to meet their mission, not only in the face of growing public health threats but as a critical partner in the Minnesota e-Health Initiative (See Attachment C for the MN-PHIN Executive Summary). MDH and local health departments need to:

- Improve how information systems collect, manage, protect, and use data to improve services to individuals and support improved assessments of community health status.
- Adopt national data standards to enable electronic exchange of data with private providers and to integrate information systems.
- Train the public health workforce in the informatics skills and principles necessary to build and use information systems effectively.

For more information, go to http://www.health.state.mn.us/e-health/mnphin

Section IV: Recommendations to the Legislature for Action

Based on the findings and recommendations of the Minnesota e-Health Advisory Committee, the Commissioner of Health makes the following recommendations to the 2007 Minnesota Legislature:

Continue and Expand Public Funding to Support e-Health Priorities:
Continue and expand the e-Health matching grant program in Minnesota Statutes, section 144.3345, through 2010 to support:

- Interoperable Electronic Health Record Adoption in rural and underserved areas, so that small primary care clinics, rural hospitals, local health departments, community clinics and long term care facilities can acquire health information technology to improve the quality and safety of care and to securely exchange health information.
- Health Information Exchange through community and regional health information exchange collaboratives that will improve the continuity and quality of care, and will reduce costs and patient discomfort through fewer duplicate tests.
- Technical Assistance and Evaluation to ensure:
    - Grantees are adhering to proven planning models and selecting electronic health records that meet interoperability standards.
    - Community and regional Health Information Exchanges are adhering to technical, privacy and security standards.
    - Rural providers and local health departments not receiving grants receive similar technical assistance.
    - Statewide efforts to adopt national health data standards and to develop detailed implementation guides are adequately supported and staffed.
    - Progress toward e-Health goals, especially in rural and underserved areas, is being assessed and reported.

Enhance Patient Privacy & Security Protections:

- Modify patient consent requirements in Minnesota Statutes, section 144.335, as described in the Minnesota Privacy and Security Project Report to preserve patient consent while clarifying consent requirements for the electronic exchange of patients' health information.

Update, Improve and Inter-Connect Public Health Information Systems:

- Update local and state public health information systems to adhere to emerging data standards.
- Update and inter-connect MDH disease surveillance systems.
- Establish standardized data exchange capabilities with private clinics, hospitals, and laboratories.
- Create greater interoperability among public health information systems to improve client services and population health assessment, and to integrate currently redundant software functions across systems.

The Governor's Budget Proposals

In support of the activities and recommendations of the Minnesota e-Health Initiative, the Governor has proposed funding for Interconnected Electronic Health Record Grants and for Disease Surveillance Modernization. The proposal is for a Health Care Access Fund appropriation of $7.50 million in FY 2008 and $11.00 million in FY 2009 and 2010 for investments in health information technology to improve safety, interconnect clinicians and communities, and strengthen and improve public health in Minnesota. The Governor's proposal:

- Continues and enhances the matching grant program to rural health care providers and underserved areas of Minnesota for adoption of interoperable electronic health records and personal health records.
- Supports implementation of the Minnesota Public Health Information Network project to update local health department systems.
- Supports technical assistance to grantees and local public health departments.

In further support of the recommendations found in this report, the Governor also proposes a Health Care Access Fund appropriation of $2 million per year to develop and implement an integrated statewide surveillance system that will comply with emerging national standards and requirements. The new system will improve the detection and response to bio-terrorism events, disease outbreaks such as pandemic flu, and trends in chronic diseases such as cancer and diabetes. The Governor's proposal complements his e-Health proposal by enabling the Minnesota Department of Health (MDH) to exchange data securely and electronically with partners who are investing in electronic health information technology.

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Attachment A

Minnesota e-Health Initiative

Minnesota e-Health Initiative Advisory Committee June 29, 2006

Emerging Themes and Preliminary Recommendations for Action

Introduction

The Minnesota e-Health Initiative (MN e-Health) is a private–public collaboration whose vision is to accelerate the adoption and use of health information technology in order to improve health care quality, increase patient safety, reduce health care costs and improve public health. It is guided by a statewide advisory committee with representatives from hospitals, health plans, physicians, nurses, other healthcare providers, academic institutions, purchasers, local and state public health agencies, citizens and others with expert knowledge of health information technology and electronic health record systems.

The Advisory Committee developed the following recommendations for priority action after eight months of information gathering and analysis, building on previous committee and workgroup actions. The recommendations are the core element of a strategic action plan being developed for Minnesota.

The recommendations are intended to actively engage all stakeholders to achieve measurable and meaningful results on defined priorities. They represent a shared responsibility to "get it right." The stakes for everyone—from patients to providers to payers—are high, and demand everyone's participation and commitment.

Committee Process and Information Acquisition

The Minnesota e-Health Advisory Committee conducted monthly half-day meetings from October 2005 to May 2006. During those eight meetings, the committee heard from 35 individuals representing 25 Minnesota health information technology projects. The presentations highlighted diverse projects and compelling experience in implementing initiatives within organization and communities.

Feature topics included:

- Health Information Exchange (HIE) projects in Minnesota (November 2005)
- Consumer access and personal health records (December 2005)
- Health Information Privacy and Security challenges (January 2006)
- Electronic health records in health systems and large settings (February 2006)
- Electronic health records in rural and underserved settings and telehealth (March 2006)
- Population and public health issues and systems. (April 2006)

Presenters were asked to provide brief perspectives on:

- the current status of their project and benefits achieved;
- challenges they faced and opportunities for advancing this technology; and
- specific policy recommendations the committee should address to advance this type of effort statewide.

"The Minnesota e-Health Initiative will accelerate the adoption and use of Health Information Technology to improve healthcare quality, increase patient safety, reduce healthcare costs and enable individuals and communities to make the best possible health decisions."
Vision statement - 2005

Emerging Themes and Preliminary Recommendations for Action

Committee members had the opportunity to ask questions to further understand the projects, clarify issues, probe into greater detail, and offer their analysis of situations and actions that should be considered.

Copies of the presentation slides and meeting summaries are available on the Minnesota e-Health web site: www.health.state.mn.us/e-health/. Input from the presentations, the committee's discussion, audience comments, and background information from all six meetings was synthesized, resulting in fourteen recommendations for priority action, grouped into four themes:

- **Empower Consumers** with the information they need to make informed health and medical decisions.
- **Inform and Connect Healthcare Providers** so they have access to the information and decision support they need.
- **Protect Communities** with accessible prevention resources, and rapid detection and response to community health threats.
- **Enhance the infrastructure** (technical, informational, educational, privacy and security policies, and financial resources) necessary to fulfill the e-Health vision and focus.

The synthesis also addresses committee members' desires to:

- **Integrate with previous work**

  Table 1 affirms the Minnesota e-Health Initiative's vision, focus, strategic goals, and committee charge.

- **Focus on consumer benefits**

  Table 2 illustrates the impact of e-Health on consumers by translating the four strategic goals into 24 consumer benefit statements.

- **Identify required infrastructure changes**

  Table 3 identifies priority action areas, and includes recommendations for specific improvement in the statewide infrastructure to achieve these changes.

- **Identify where public funding is needed**

  Table 3 identifies which recommendations are most appropriate for public funding, based on the principles of the 2005 e-Health Steering Committee Finance Workgroup.

- **Identify actionable details such as goals, milestones, and targets**

  To be developed in the fall of 2006.

- **Acknowledge that progress will be incremental**

  While progress will be accelerated through these priority actions, it will rarely be rapid, given the many interdependent complexities of adopting HIT across diverse health care settings.

- **Acknowledge that progress is dependent upon appropriate funding, both one-time and ongoing**

  This includes strategic use of public funding (federal, state, local) in conjunction with private investment, and aligning incentives for the use of HIT.

Planned Next Steps

During the next six months, the Advisory Committee will add goals, targets, milestones, status, lead organizations, and proposed level of public funding for each of the recommendations. It will then move to finalize the recommendations before including them in the report to the Commissioner of Health and the Minnesota Legislature in December 2006.

The Advisory Committee's 2007 work plan will identify the priorities for committee action.

Table 1: Summary of Vision, Focus, Strategic Goals and Committee Charge

Vision	**The vision of the Minnesota e-Health Initiative is to accelerate the use of health information technology to improve healthcare quality, increase patient safety, reduce healthcare costs, and enable individuals and communities to make the best possible health decisions.**			
Focus	• **Empower Consumers** with the information they need to make informed health and medical decisions. • **Inform and Connect Healthcare Providers** so they have access to the information they need. • **Protect Communities** with accessible prevention resources, and rapid detection and response to community health threats. • **Enhance the infrastructure** (technical, information, education, privacy and security policies, and financial resources) necessary to fulfill the e-Health vision and focus.			
Strategic Goals	**(1) INFORM Clinical Practice**	**(2) INTERCONNECT Clinicians and Communities**	**(3) PERSONALIZE Care**	**(4) IMPROVE Population/Public Health**
Committee Charge	**Recommend to the Commissioner of Health immediate and incremental priority actions for achieving the adoption and use of interoperable health information technology across Minnesota.**			

Table 2: Consumer Benefit Statements by Strategic Goal

Goal 1: Informing Clinical Practice – Electronic Health Records

- I save time and worry because there is no need to fill out lengthy forms or explain my health history (and possibly forget something important) every time I see my healthcare provider.
- I increase the likelihood of receiving the care I need.
- My healthcare will be safer because my provider will have the right information to help make better decisions.
- My electronic health record can be encrypted and backed up, so it would be protected, yet accessible by my doctor, even after a disaster that would have destroyed my old paper record.
- My information will always be available so I won't need to bring my medical records with me to doctor appointments to ensure that I receive appropriate, high quality care.
- My healthcare will be more affordable because I won't have to spend extra time and money to re-take tests and x-rays unnecessarily.

Goal 2: Interconnecting Clinicians – Health Information Exchange

- All of my healthcare providers (primary doctor, nurse, etc.) have health information about me that is available without the time delay and risk of transporting paper records. (Example information: medications taken, health history, and lab results.)
- It is easier for me to move from one provider to another.
- Ready access to my information will improve communication and coordination of care among my caregivers. (That is, my doctor can read about my visits to the specialist last week or last year.)
- Time will not be lost in an emergency while ER staff reconstructs my medical history.
- No matter where I go to the doctor, my providers have health information about me.
- I have the best possible disease protection in the case of community-wide outbreaks or natural disasters.

Goal 3: Personalize Care - Personal Health Records

- I have convenient and secure access to my personal health information.
- I have the information I need, whenever I need it, to help my children and elderly parent who rely on me for health decisions.
- I can ask good questions and am able to make better healthcare decisions for my children, my elderly parent, and me based on pertinent, personalized information.
- I can record my health history and set reminders to help me monitor and take responsibility for my healthcare, particularly my chronic conditions.
- I get test results quickly and can understand them.
- I am aware of potential drug interactions with the medications that I am taking.
- My electronic "clipboard" with my recent health information can be used by all of my healthcare providers.
- I can use e-mail to securely ask my physician confidential health questions.
- I keep tabs on the health information contained in my record and provide updates when needed.

Goal 4: Population and Public Health – Public Health Information Network

- I have greater confidence that, because public health agencies and healthcare providers are connected electronically, they can communicate more easily and respond quicker in the event of a health emergency.
- Since we are better informed about public health issues in our community, my neighbors and I are healthier because diseases and other risks are prevented, healthy behaviors are supported, and environmental health hazards are reduced.
- I am supported in taking responsibility for my health and wellness by the prevention and wellness resources that are available electronically in my community.
- I have support from programs and other electronic resources that help me in caring for my health.

Table 3. MN e-Health Advisory Committee Recommendations for Action

Summary of Themes and Recommendations for Action Needed to Advance the Statewide Implementation and Use of HIT	Relates to				Proposed Public Funding†	Status Statewide†† (1 Low-4 High)
	Inform practice	Interconnect Care Providers	Personalize care	Improve public health		
Empower Consumers						
1. Accelerate the availability and use of accessible, portable "My Personal Health Record," with priority given to:						
1a. "My Preventive Health Information" (immunizations, well child screenings) for children and adolescents;			✔	✔	◒	2
1b. "My Medication and Health History Information" ("My Clipboard") for all individuals; and			✔	✔	◒	1
1c. "My Care" management tools for individuals with chronic disease (diabetes, asthma, heart disease, cancer).			✔	✔	◒	1
Inform and Connect Healthcare Providers						
2. Fund and implement interconnected health information technology statewide, focusing on secure health information exchange in the following priority areas:						
2a. Continuity of Care Records, through secure and timely exchange of patient health histories;	✔	✔	✔		○	1
2b. e-Prescribing;	✔	✔	✔		◒	2
2c. Shared information for improved chronic disease management;	✔	✔	✔	✔	◒	2
2d. Accessible, complete laboratory result reports with the interpretation of the results; and	✔	✔		✔	◒	1
2e. Fully integrate bi-directional immunization data exchange between the registry and EHRs, with centralized decision support from the registry.	✔	✔	✔	✔	◓	3
Protect Communities						
3. Improve population health and protect communities through accessible prevention resources, widespread knowledge of community risks, and rapid detection of and response to public health threats, including to:						
3a. Improve the timely detection and electronic reporting of diseases to public health authorities, with timely return of information on community risks and threats.	✔			✔	●	1
3b. *Create and support an integrated state-local Minnesota Public Health Information Network (MN-PHIN) for timely detection of and response to infectious disease and other emergencies.	✔	✔	✔	✔	●	1

†Proposed Public Funding
● = Significant or full reliance on public funding ◓ = Considerable reliance on public funding
◒ = Little reliance on public funding ○ = No use of public funding

††Status of Statewide Progress on this Recommendation (estimate)
1 = Not started or very limited progress
2 = Some progress
3 = Widespread progress
4 = Statewide achievement of recommendation

Emerging Themes and Preliminary Recommendations for Action

Summary of Themes and Recommendations for Action Needed to Advance the Statewide Implementation and Use of HIT	Relates to				**Proposed Public Funding†**	**Status Statewide†† (1 Low-4 High)**
	Inform practice	**Interconnect Care Providers**	**Personalize care**	**Improve public health**		
Essential Activities Needed to Support the Priorities Above						
Related to technical infrastructure:						
4. Improve access to secure telehealth services in rural and underserved areas, including upgrades to high-speed Internet services ("the last mile").	✔	✔	✔		◓	2
5. Measure and publish, on an ongoing basis, statewide progress on priority actions to achieve the adoption and effective use of HIT.	✔	✔	✔	✔	◓	2
Related to education and information:						
6. Provide the information resources for HIT implementation in rural and underserved settings‡, to minimize risk and ensure their effective use.	✔	✔	✔	✔	◓	2
7. Increase the workforce capacity around health informatics and health information technology, including assessing current needs and developing training and educational solutions.	✔	✔		✔	◓	2
8. Increase public awareness of the benefits and effective use of secure health information technology, especially electronic health records and personal health records; enable input into statewide privacy and security laws and policies.	✔	✔	✔	✔	◓	1
9. Increase statewide access to model policies, best practices, algorithms, training and other essential resources.	✔	✔		✔	◓	2
Related to privacy and security policy, and finance:						
10. Advance the incentives for adoption and use of Electronic Health Records and other health information technologies in private and public health settings‡.	✔	✔	✔	✔	◒	1
11. Provide matching funds to the Minnesota Health Care Connection (MHCC) to coordinate policy development and other support for regional health information exchanges.	✔	✔	✔		◓	1
12. Establish a Minnesota roadmap for use and adoption of HIT data and information standards in healthcare and public health.	✔	✔		✔	◓	1
13. Develop a roadmap for how electronic health records can improve health and healthcare quality and support performance measurement, beginning with quality measures for preventive health.	✔	✔	✔	✔	○	1
14. Provide sources of capital funds so that rural and underserved settings‡ can make the initial investment in EHRs.	✔	✔	✔	✔	◓	2

†Proposed Public Funding

● = Significant or full reliance on public funding
◓ = Considerable reliance on public funding
◒ = Little reliance on public funding
○ = No use of public funding

††Status of Statewide Progress on this Recommendation (estimate)

1 = Not started or very limited progress
2 = Some progress
3 = Widespread progress
4 = Statewide achievement of recommendation

Emerging Themes and Preliminary Recommendations for Action

Summary of Themes and Recommendations for Action Needed to Advance the Statewide Implementation and Use of HIT	Relates to: Inform practice	Interconnect Care Providers	Personalize care	Improve public health	Proposed Public Funding†	Status Statewide†† (1 Low-4 High)
15. Establish a Health IT council for state government to coordinate the implementation of interoperable interagency exchange among health information systems (based on the federal inter-agency informatics group).		✔		✔	●	1
16. * Identify variations in privacy and security policies and laws; recommended solutions for efficient and secure exchange that ensure consumer protection, including patient authentication and policy for release notification.	✔	✔			◓	2
17. Establish a process for ongoing needs assessment, priority setting, and evaluation.	✔	✔	✔	✔	◒	2

†Proposed Public Funding

● = Significant or full reliance on public funding
◓ = Considerable reliance on public funding
◒ = Little reliance on public funding
○ = No use of public funding

††Status of Statewide Progress on this Recommendation (estimate)

1 = Not started or very limited progress
2 = Some progress
3 = Widespread progress
4 = Statewide achievement of recommendation

†State government subsidies, financing or incentives should complement rather than displace private and federal government investment. The design and targeting of public sector investments should be based on an objective assessment of the public good derived from that investment, and the location and extent of financial barriers within the health systems. Subsidies should only be provided to the extent needed to provide an acceptable return on investment or other benefit, and expenditures with a decent return on investment or cost-benefit ratio should finance themselves. (MN e-Health Finance Work Group, 2005)

‡ 'Settings' includes clinical, long term care, home health, public health, hospitals, and any other health-related organization/domain generally considered to be part of MN e-Health.

Denotes a major initiative of the Minnesota e-Health Advisory Committee for 2006-2007.

2005 – 2006 MN e-Health Advisory Committee Members

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MN e-Health Advisory Committee Co-Chair
President and CEO, HealthPartners

Mary Wellik, MPH, PHN
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Carolyn Pare
Buyers Health Care Action Group
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Kim Pederson
Allina Hospitals and Clinics
Representing Large Hospitals

Deb Switzer, RHIA
Chris Jensen Health and Rehabilitation Center
Representing Long Term Care

Greg Thomas, MBA
Mayo Health System
Representing Academics and Research

Previous Advisory Committee Members Serving in 2005 – 2006 program year:

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Representing Long Term Care
David Moertel, MBA
Mayo Health System
Representing MN-HIMSS
Patsy Riley, PhD
Representing MN Quality Improvement Organization

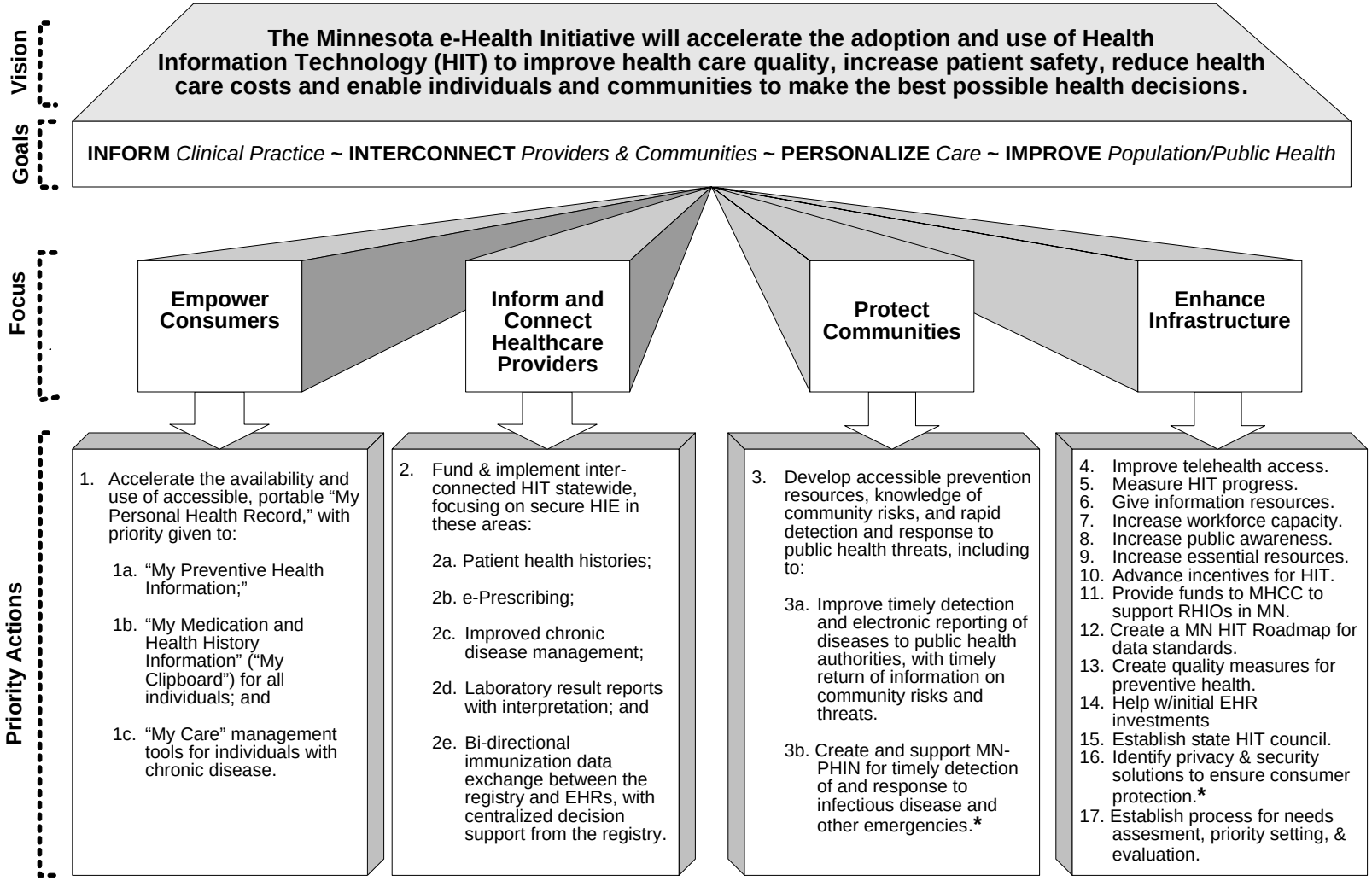
MDH MN e-Health Initiative Project Team

Bill Brand, Amy Camp, James Golden, Tracy Johnson, Marty LaVenture, Scott Leitz, Kristin Loncorich, Tom Major, Catherine Malave, Colleen Morse, Mark Schoenbaum, Barb Wills

"The Minnesota e-Health Initiative will accelerate the adoption and use of Health Information Technology to improve healthcare quality, increase patient safety, reduce healthcare costs and enable individuals and communities to make the best possible health decisions."
Vision statement - 2005

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

2006 Minnesota e-Health Roadmap for Strategic Action



***Denotes a major initiative of the Minnesota e-Health Advisory Committee for 2006-2007.**

MN e-Health Summit ~ June 29, 2006

"The Minnesota e-Health Initiative will accelerate the adoption and use of Health Information Technology to improve healthcare quality, increase patient safety, reduce healthcare costs and enable individuals and communities to make the best possible health decisions."
Vision statement - 2005

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

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Attachment B

MN e-Health Initiative
2006-2007 Advisory Committee Members

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Olmsted County Public Health Services
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Dr. Alan Abramson
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Dr. Kristin Benson
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Ms. Laurie Beyer-Kropuenske
Representing: State Government

Mr. R.D. Brown
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Dr. Donald Connelly
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Ms. Rhonda Degelau
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Mr. Fred Dickson
Representing: Health Plans

Mr. Andrew Galbus
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Dr. Raymond Gensinger, Jr.
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Mr. John Gross
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Ms. Mary Klimp
Representing: Small Hospitals

Dr. Marty LaVenture
Representing: MN e-Health Initiative

Ms. Katie LeBeau
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Dr. Jennifer Lundblad
Representing: MN Quality Improvement Organization

Ms. Bobbie McAdam
Representing: Health Plans

Ms. Rina McManus
Representing: Local Public Health

Ms. Cindy Nelson
Representing: Laboratories

Assistant Commissioner Brian Osberg
Representing: State Government Purchasers

Ms. Carolyn Pare
Representing: Purchasers of Health Care

Ms. Kimberly Pederson
Representing: Large Hospitals

Mr. Peter Schuna
Representing: Long Term Care

Mr. Gregory Thomas
Representing: Academics and Research

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Attachment C

Executive Summary of the MN-PHIN Report

The Minnesota Public Health Information Network (MN-PHIN) was created by the 2005 Minnesota Legislature to improve and protect the health of Minnesotans through the strategic application and management of health information systems. The MN-PHIN initiative seeks to ensure that state and local health departments have the information systems, policies and technical expertise necessary to meet their mission, not only in the face of growing public health threats but as a critical partner in the Minnesota e-Health Initiative. Public health is one of the four domains included in both the state and national e-Health initiatives.

The state-local Steering Committee for MN-PHIN has identified three overall strategies:

Interconnect. Ensure public health departments can electronically and securely exchange health information by adopting national and state data standards.

Integrate. Create more uniformity across public health information systems by defining the fundamental work of public health in ways that ensure new and existing information systems effectively support that work.

Inform. Use health information in more effective, efficient and integrated ways to improve services for the individuals, families and communities served by public health.

While crucial groundwork has been laid in the past two years, the MN-PHIN initiative must ensure that public health agencies can meet the challenges and opportunities of the e-Health transformation:

1. Improving how information systems support efficient and effective services to consumers.
2. Closing the technology gap between the governmental public health and the private health care sector.
3. Adopting national and state data standards to enable secure and electronic exchange of data and to integrate information systems.
4. Training the public health workforce in the informatics skills and principles necessary to build and use information systems effectively.

The Governor's Budget Proposals
In support of the activities and recommendations of the Minnesota Public Health Information Network, the Governor has proposed funding for a Health Care Access Fund appropriation of $500,000 in FY 2008 and $250,000 in FY 2009 and 2010 for investments in health information technology to modernize local health department information systems and to strengthen and improve public health in Minnesota. This proposal:

- Supports implementation of the Minnesota Public Health Information Network initiative to update local health department systems.
- Supports technical assistance to grantees and local health departments.
- Supports interoperability with other e-Health Initiatives statewide.

In further support of the recommendations found in this report, the Governor also proposes a Health Care Access Fund appropriation of $2 million each fiscal year to develop and implement an integrated statewide surveillance system that will comply with emerging national standards and requirements. The new system will improve the detection and response to bio-terrorism events, disease outbreaks such as

pandemic flu, and trends in chronic diseases such as cancer and diabetes. The Governor's proposal complements his e-Health proposal by enabling the Minnesota Department of Health (MDH) to exchange data securely and electronically with partners who are investing in electronic health information technology.

Recommendations to the Legislature for Action

The Commissioner of Health recommends that the 2007 Minnesota Legislature support the Governor's budget proposals as described above. Support of these proposals will lead to effective action in modernizing public health information systems by:

1. Reducing the growing public-private technology gap by modernizing current information systems to securely exchange infectious disease and other health data with private providers.
2. Addressing the shortage of trained state and local public health informaticists by collaborating with post-secondary institutions to develop informatics courses specifically designed for practicing public health professionals.
3. Coordinating, supporting and evaluating the above activities by ensuring adequate public health informatics expertise exists at MDH and is readily available to local health departments and MDH programs.

The Governor's budget proposals and the Commissioner's recommendations are based on the findings and recommendations of the MN-PHIN Steering Committee, with the endorsement of the State Community Health Services Advisory Committee.

Attachment D

Overview of the Minnesota Privacy and Security Project

Under the Minnesota e-Health Advisory Committee's direction, the Minnesota Privacy and Security Project has conducted a systematic review of current laws and practices to:

- Identify the most significant privacy and security issues facing organizations in implementing the electronic exchange of health information; and
- Develop solutions to eliminate or reduce these two privacy and security barriers while preserving and strengthening patient privacy protections.

Health industry stakeholder and consumer involvement are critical to ensuring that the project's results are broadly acceptable and applicable to the community. The project's efforts represent the input, deliberations, and analysis of interested stakeholders and consumer representatives gathered over 25 meetings and 56+ hours of discussion.

The project revealed that the most significant privacy and security concerns impeding the electronic exchange of health information are universal, overarching issues that impact all types of health care organizations and apply to all types of health information. The overarching privacy and security issues that must be solved to advance the appropriate electronic exchange of health information are:

- Implementation of Minnesota's patient consent requirements within a health information exchange;
- Operational difficulties in first providing, and then limiting and monitoring external organizations' electronic access to patient data; and
- Liability concerns with the inappropriate disclosure of patients' health information.

The project proposed a number of modifications to Minnesota Statutes, section 144.335 to resolve differences between health care providers regarding "when" and "how" patient consent is required to exchange patients' health information by:

- Defining undefined terms and ambiguous concepts in Minnesota's patient consent requirements;
- Adding language to clarify the application of Minnesota's patient consent requirements to new concepts in the electronic exchange of health information; and
- Updating Minnesota's patient consent requirements to allow mechanisms that facilitate the electronic exchange of patients' information while respecting the patients' ability and wishes for controlling their information.

The project also developed a set of 19 principles for authorizing and authenticating individuals, setting access controls, and auditing in a health information exchange. These principles provide security guidance that is independent of particular technologies/architectures and is scaleable in a manner that accommodates small and large models of health information exchange. These efforts provide Minnesota health care organizations a common foundation and framework for guiding their decision making in forming and implementing health information exchanges.

For more information on the Minnesota Privacy and Security Project, see:
http://www.health.state.mn.us/e-health/mpsp/index.html

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Attachment E

Summary of the 2006-2007 Minnesota e-Health Grant Projects

Background

The Minnesota e-Health grant initiative originated with Governor Pawlenty's 2006 request of $12 million for grants to establish interoperable electronic health records in rural and underserved areas of Minnesota, for which the Minnesota Legislature ultimately appropriated $1,500,000. The program, set out in Minnesota Statutes, section 144.3345, supports those healthcare providers and public health agencies in rural and medically underserved areas of the state that frequently cannot fully afford the conversion to health information technology. The intent is to prevent a two-tiered health system in terms of patient access to the benefits of e-Health.

Of the $1.3 million authorized for grants (the remaining $200,000 earmarked for administration of the program), MDH awarded 12 grants: seven for readiness assessment and planning projects for organizations exploring new or expanded health information technology (HIT), and five for implementation projects to advance health information technology (HIT) in a community.

Each project consists of a community e–health collaborative of at least three health organizations that have agreed to work together to either plan for or implement electronic health records and/or health information exchange. Each of the communities listed are in rural settings, most designated as Medically Underserved and Health Professional Shortage areas.

Review of the grant proposals revealed that:

- Greater Minnesota is ready and anxious to be part of e-Health;
- rural hospitals and providers are very willing to collaborate on HIT and HIE issues as they recognize it is important for their survival;
- projects would benefit from technical support for systematic, thorough planning and help in choosing EHR and other applications; and
- the need is great—MDH received more than double the requests for funding than the program was ultimately able to support.

Planning and Readiness Assessment Projects ($252,000 awarded)

Lead Agency: Cass Lake IHS (Cass Lake)
Collaborators: Leech Lake Tribal Health; Red lake Indian Hospital; White Earth Health Center
Description: This project will define existing data sets, leverage combined resources (medical records), assess technical capabilities & determine community support for both an HIT Records Network and a local unified health information records database that would serve 72% of the American Indian population in the region.
Amount: $20,000
Contact: Jenny Jenkins, jenny.jenkins@ihs.gov

Lead agency: Lac qui Parle Health Network (Madison)
Collaborators: Johnson Memorial Health Services (Dawson); Appleton Area Health Services; Madison Lutheran Home

Description: Assess existing information systems and capacity at each facility; conduct cost benefit analysis for conversion to EMRs.
Amount: $40,000
Contact: Mark Roisen, mroisen@farmerstel.net

Lead agency: Lakeview Medical Clinic (Sauk Centre)
Collaborators: Other health care providers in the Sauk Center area; Main Street Drug; Coborn's Pharmacy
Description: To support the development & implementation of e-prescribing for 800+ senior citizens in a 10 mile geographical service area. Medication histories would be collected at senior living facilities and entered into a single, shared and accessible database.
Amount: $20,000
Contact: Mike Flicker, mflicker@lakeviewclinic.org

Lead agency: Minnesota Health Care Connection (MnHCC) (Statewide)
Collaborators: Community Health Information Collaborative (CHIC); Itasca County Health Care Network (ICHN); Stratis Health
Description: To help accelerate and drive the adoption of health information exchange (HIE) across the state through four major areas: (1) Develop a toolkit to assess the level of HIE readiness; (2) pilot and refine the toolkit by working with two HIE's (CHIC & ICHN); (3) document the current state of HIE in MN; and (4) synthesize the "MN HIE workplan."
Amount: $49,000
Contact: Greg Linden, glinden@stratishealth.org

Lead agency: Neighborhood Health Care Network (for the Community Care Network) (Metro)
Collaborators: Northpoint Health & Wellness Center; Westside Community Health Services; Hennepin County Community Health; Hennepin County Medical Center; UCare; Minnesota Department of Human Services
Description: Conduct an assessment and create a plan for linking information systems of the multiple CCN partners so that patient data can be exchanged and managed across multiple care settings to provide comprehensive care. Assess clinical information exchange, assess what operational information exchange is needed, assess current HIT use and HIE readiness, and plan for integrated HIE among CCN partners.
Amount: $45,000
Contact: Walter Cooney, walter.cooney@nhcn.org

Lead agency: Ortonville Area Health Services (Ortonville)
Collaborators: Graceville Health Center; Northside Medical Center; Carlson Drug; Liebe Drug; Countryside Public Health
Description: Assess current levels of IT/IS, increase understanding of the value of IT/IS and the creation of a plan of action to leverage their combined resources in order to better serve patients in a rural setting.
Amount: $38,000
Contact: Richard Ash, ashr@ortonvilleareahealth.org

Lead agency: Roseau Area Hospital & Homes (Roseau)
Collaborators: Altru Clinic; Mattson Pharmacy
Description: Determine how to implement e-health technologies that will (1) transmit e-prescribing; (2) electronically share medication information & (3) electronic lab results.
Amount: $40,000

Contact: Milly Prachar, mprachar@rahhinc.com

Implementation Projects ($1,048,000 awarded)

Lead agency: Community Health Information Collaborative (Northeast MN)
Collaborators: SMDC Health Systems; SISU Medical Systems; St. Luke's Hospital and Clinics; the health and/or human services agencies of Carlton, Cook, Itasca, Lake and St. Louis counties; College of St. Scholastica Center for Healthcare Innovation
Description: Expand regional health information exchange services by: (1) piloting secure e-mail; (2) expanding CHIC's single access web portal to include access to new applications and services; and (3) developing a survey tool for ongoing assessment of regional HIT adoption.
Amount: $224,000
Contact: Cheryl Stephens, cstephens@medinfosystems.org

Lead agency: Cuyuna Range District Hospital (Crosby)
Collaborators: Central Lakes Medical Center (Crosby); Longville Lakes Clinic
Description: Implement an interoperable EHR across four health care settings. Develop and implement practice templates to improve care to patients with chronic disease.
Amount: $200,000
Contact: Theresa Sullivan, tsullivan@sisunet.org

Lead agency: Pine Medical Center (Sandstone)
Collaborators: Gateway Family Health Clinics; Mercy Hospital and Health Care Center
Description: Upgrade and interface EHRs across multiple clinic settings; enable remote physician access to data; implement health maintenance alerts.
Amount: $124,000
Contact: Katie Kerr, kkerr@pinemedical.org

Lead agency: Stratis Health (for a project Willmar)
Collaborators: Affiliated Community Medical Center; Family Practice Medical Center; Rice Memorial Hospital; Rice Care Center; Kandiyohi County Public Health; Kandiyohi County Human Services; University of Minnesota Health Informatics; Avenet Web
Description: Pilot a Personal Health Record (myHealthfolio) as a way to exchange data across EHRs in the Willmar area. The focus is on improving the quality and continuity of care for patients with chronic disease.
Amount: $250,000
Contact: Sue Severson, sseverson@mnqio.sdps.org

Lead agency: Tri-County Hospital (Wadena)
Collaborators: Fair Oaks Lodge; Wadena Medical Clinic; Rural Radiology; Wadena County Public Health
Decription: Implement an EHR in five ambulatory settings, with a focus on implementing clinical decision support and e-prescribing.
Amount: $250,000
Contact: Maureen Ideker, maureen.ideker@tricountyhospital.org

Minnesota e-Health Grants by Purpose

Four EHR:

1 Planning: Lac qui Parle Health Network (Madison);
3 Implementation: Cuyuna Range District Hospital (Cuyuna), Pine Medical Center (Sandstone), Tri County Hospital (Wadena)*

Five HIE:

4 Planning: Cass Lake (Cass Lake), MnHCC (statewide), Roseau Area Hospitals & Homes (Roseau), Neighborhood Health Care Network (Metro);
1 Implementation: Community Health Information Collaborative (NE Minnesota)

One e-Prescribing

1 Planning: Lakeview Medical Clinic (Sauk Centre)

One Assessment

1 Planning: Ortonville Area Health Services (Ortonville)*

One PHR

1 Implementation: Stratis Health (Willmar Area)*

*Denotes local public health department involvement.